



ROYAL OBSERVATORY, HELWAN

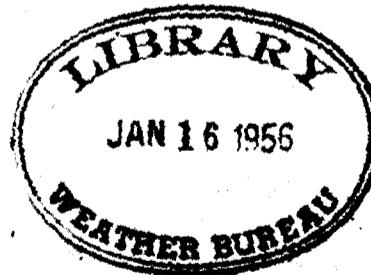
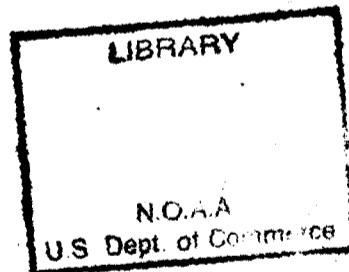
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METEOROLOGICAL REPORT FOR THE YEAR 1943

Published under the Direction of

M. R. MADWAR, PH.D., F.R.A.S., F.R.S.E.,
Director of the Royal Observatory, Helwan

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METEOROLOGICAL REPORT

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INTRODUCTION

This report contains the observations made at Royal Observatory, Helwan, which is the first order station for Egypt. They are presented in the same manner for the former years.

The instruments used in the observatory for recording the various elements have been as follows:—

Pressure.—A Sprung-Fuess barograph, scale value 5 mms. = 1 mm. of mercury, standardized by comparison with a Fuess station barometer which has itself been compared with a normal barometer. A Richard self-recording barograph is used in addition to the Dines self-recording barometer in case of failure of the Sprung-Fuess.

Temperature and Humidity.—Richard thermographs with scales of 5 mms. to 1 °C. separate instruments being used as dry bulb and wet bulb, controlled by eye readings in the screen taken five times a day.

Actinometric Observations.—Readings are daily made at 14 h. with bright and black bulbs in vacue.

Wind.—A Kew pattern 9-inch cup anemograph, the height of the cups being twenty metres above the ground level. The factors 2·2 is used in the reduction. A Dines anemobiograph is used to record the wind directions and the instantaneous wind velocity in case of failure of either the Kew anemograph, or the old Dines anemograph which is only used for recording the instantaneous wind velocity.

Observations of upper wind are made by means of pilot balloons. Generally a single theodolite is used and a uniform rate of rise is assumed, the formula employed being:—

$$V = 84 \frac{L^{\frac{1}{2}}}{(L+W)^{\frac{1}{3}}}$$

where W = weight in grammes, and is about 20.

L = lift in grammes, and is about 50.

V = rate of rise in metres per minute, and is about 150.

Sometimes two theodolites and a known base (of 540, 610, or 1,210 metres) are used.

A summary of the observations made at Helwan during the period 1920-1923, and of most of the remaining available observations of the motion of the upper strata of the atmosphere in Egypt and the Sudan, will be found in Physical Department Paper No. XVII. "The upper currents of the Atmosphere in Egypt and the Sudan" (1925). A further analysis of the ascents at Helwan during the period 1920-1928 is given in Physical Department Paper No. XXVII "Upper Winds at Cairo and Khartoum" (1930), by L. J. Sutton.

Duration of Sunshine.—A Campbell-Stokes sunshine recorder. As is usual with these instruments, even on a perfectly clear day there is a considerable interval both after sunrise and before sunset when the sun's rays are not powerful enough to burn the card. The recorded percentage of possible hours of sunshine is thus always less than the actual.* A report on the Campbell-Stokes recorder in use is given in Physical Department Paper No. XV (1924).

Evaporation.—A Piche evaporimeter in a double-louvred screen. Experiments have been made (see "Evaporation in Egypt and the Sudan", Survey Department Paper No. 15, [1909] by B. F. E. Keeling) connecting such measures of evaporation with the evaporation from open surfaces of water under various conditions. Further comparisons have been carried out for some years in Egypt and the Sudan and are published in "The Nile Basin", Volume 1, by Hurst and Phillips.†

Rainfall.—Self-recording rain-gauge by Negretti and Zambra, and ordinary rain-gauge, both cylindrical with catchment 200 area sq. cms., the rims being 1 metre above the ground.

Phenomena.—The following symbols and conventions have been employed:—

ϕ = latitude, in all cases N.

λ = longitude, in all cases E, of Greenwich.

, = drizzle.

● = rain.

▽ = showers.

* = snow.

* See also Meteorological Office, London, Professional Notes No 53.

† Cairo Government Press, 1931, Physical Department Paper No 26.

*	= sleet.
▲	= hail.
↗	= gale.
<	= distant lightning (without thunder).
R	= thunderstorm (thunder and lightning, or thunder only).
==	= mist (visibility less than one kilometre).
8	= dust haze.
s	= dust or sand storm.
≡	= fog (visibility less than one kilometre).
ξ	= dust devil.
D	= dew.
□	= hoar frost.
○	= rainbow.
0	= unusual visibility of distant objects.
⊕	= solar halo.
Ⓐ	= solar corona.
⊖	= lunar halo.
⓪	= lunar corona.

Intensity is expressed by attaching exponents 0 or 2 to the symbols. Thus \equiv^0 indicates thin fog and \equiv^2 thick fog, etc.

Exposure of instruments.—The standard instruments are exposed in double-louvred screens of the Egyptian pattern, similar to those used in the second and third order stations in Egypt, except that the latter are rather smaller and in most cases single-louvred. For a comparison of temperature readings taken in the screen with those taken by means of an Assmann ventilated psychrometer, see Introduction to the Meteorological Report for 1920.

General.—All the times in this part of the Report are Helwan local time, which is two hours and five minutes fast on Greenwich mean time. A detailed analysis of the meteorological observations extending over seventeen years is contained in Physical Department Paper No. XX "The Climate of Helwan", (1926) by L. J. Sutton.

M. R. MADWAR,
Director,
Royal Observatory, Helwan

STANDARD PRESSURE

(Millibars)

1943

The pressures published are Standard Pressures, *i.e.* they have been reduced to 0°C. and mean gravity, the correction which has been applied for reduction to mean gravity being—1·33 m.b.

The height of the barometer above sea-level is 115·6 metres, and the following are the mean corrections for each month to be applied to reduce to pressures at sea-level:—

Month	Altitude Correction		
		m.b.	
January	+ 13·87		
February	+ 13·85		
March	+ 13·71		
April	+ 13·60		
May	+ 13·29		
June	+ 13·19		
July	+ 13·01		
August	+ 12·99		
September	+ 13·11		
October	+ 13·17		
November	+ 13·40		
December	+ 13·67		

STANDARD PRESSURE**MEAN OF DAY**

900 m.b. +

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
1	109.01	113.69	107.06	100.10	99.41	103.81	98.35	95.04	96.05	95.84	101.34	103.10
2	105.21	112.74	102.72	95.00	99.69	103.09	97.95	94.44	97.25	97.28	102.80	104.20
3	98.01	108.82	101.85	95.91	100.34	101.90	98.56	95.01	97.24	97.24	100.97	105.13
4	96.97	106.98	103.98	89.95	99.25	101.84	96.65	96.35	97.77	99.29	101.82	106.02
5	101.66	109.14	107.24	99.68	98.51	99.15	92.48	96.95	97.57	101.38	103.10	107.68
6	106.08	108.46	108.88	102.68	99.80	99.31	93.72	95.56	96.68	101.77	105.34	107.61
7	106.92	104.89	110.78	103.68	101.34	102.12	96.49	92.65	96.48	103.12	104.34	107.21
8	106.04	106.53	106.12	103.25	100.78	101.60	94.65	92.05	96.84	104.18	101.41	108.34
9	105.64	108.65	103.20	101.54	100.08	100.05	92.81	92.52	100.72	102.61	99.59	110.62
10	104.72	105.21	102.58	97.59	102.22	99.35	94.03	93.03	100.74	98.41	102.05	111.57
11	104.34	99.81	101.62	101.94	102.72	99.87	96.55	94.45	98.48	98.25	103.90	110.96
12	107.00	98.49	97.04	104.85	102.08	99.51	97.63	93.04	97.17	99.60	104.26	107.98
13	106.28	99.80	94.32	106.42	99.67	98.15	96.96	91.65	97.13	100.14	101.37	105.44
14	100.53	102.77	95.31	105.89	99.21	97.12	95.73	93.92	97.64	100.32	102.80	103.32
15	103.14	104.21	96.32	104.81	98.93	96.44	95.15	96.99	99.09	99.88	105.17	102.97
16	104.80	104.53	97.15	104.62	100.54	94.52	95.37	98.40	99.52	99.76	106.36	101.64
17	102.65	108.84	99.48	104.14	100.45	96.05	94.81	95.12	97.07	99.84	103.85	103.01
18	102.25	106.01	101.20	103.78	98.95	97.35	94.41	93.17	96.03	101.12	103.00	106.66
19	100.36	103.92	92.28	107.78	100.18	98.64	94.85	93.33	97.27	100.62	104.10	106.82
20	99.44	102.76	88.05	109.73	102.81	99.15	97.01	95.17	98.24	98.81	104.40	108.36
21	104.24	100.36	92.35	106.32	103.88	99.77	98.48	95.00	97.75	99.36	103.33	107.26
22	107.64	96.35	97.84	103.53	101.94	99.17	97.29	95.29	99.25	98.69	104.58	100.69
23	107.04	98.00	99.80	104.37	100.57	98.45	93.40	95.13	99.05	99.65	107.02	103.94
24	106.68	106.33	101.97	104.28	100.88	98.77	91.16	93.84	97.33	101.08	106.17	107.04
25	106.85	107.58	104.40	104.12	102.05	98.81	94.00	94.84	96.53	101.81	104.41	104.32
26	103.42	107.46	107.48	103.04	100.52	98.00	95.25	97.08	98.60	102.28	103.66	104.80
27	101.40	109.53	108.76	101.48	97.24	98.77	95.83	97.75	99.68	102.34	103.93	103.66
28	103.84	110.02	109.25	102.36	97.15	97.69	95.89	97.45	99.43	102.37	103.81	104.02
29	105.24	—	105.57	102.06	100.72	96.95	94.73	96.09	95.77	102.61	105.57	104.68
30	106.98	—	102.41	99.32	101.96	97.24	93.64	94.77	94.76	101.76	103.68	102.94
31	109.48	—	99.97	—	103.14	—	93.79	95.27	—	100.86	—	101.10
Mean	104.32	105.42	101.52	102.48	100.54	99.09	95.41	94.88	97.73	100.40	103.61	103.58

STANDARD PRESSURE

(Millibars)

Deviation from Monthly Means for every Hour

1943

Month	HOURS OF OBSERVATIONS																							Mean of Month	
	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	Midn.	
January	-0.29	-0.19	-0.16	-0.27	-0.23	+0.04	+0.53	+1.01	+1.57	+1.69	+1.12	+0.15	-0.72	-1.12	-1.21	-1.15	-0.99	-0.69	-0.17	+0.11	+0.36	+0.33	+0.21	+0.03	1004.32
February	+0.17	-0.08	-0.36	-0.48	-0.33	-0.05	+0.37	+0.77	+1.23	+1.40	+1.12	+0.40	-0.44	-0.93	-1.16	-1.21	-0.97	-0.72	-0.28	+0.07	+0.28	+0.43	+0.47	+0.32	1005.42
March	+0.43	+0.17	-0.19	-0.32	-0.12	+0.08	+0.41	+0.91	+1.19	+1.16	+0.99	+0.41	-0.29	-0.88	-1.29	-1.43	-1.27	-0.89	-0.51	-0.07	+0.31	+0.36	+0.36	+0.36	1001.52
April	+0.45	+0.03	-0.39	-0.45	-0.23	+0.17	+0.69	+0.99	+1.16	+1.08	+0.77	+0.20	-0.35	-0.96	-1.49	-1.68	-1.59	-1.24	-0.65	+0.01	+0.64	+0.91	+1.01	+0.83	1002.48
May	+0.21	-0.13	-0.33	-0.39	-0.16	+0.13	+0.57	+0.85	+1.03	+1.04	+0.76	+0.37	-0.03	-0.61	-1.05	-1.32	-1.44	-1.17	-0.80	-0.13	+0.43	+0.75	+0.79	+0.72	1000.54
June	+0.60	+0.33	+0.15	+0.16	+0.28	+0.55	+0.88	+1.00	+0.87	+0.79	+0.56	+0.05	-0.47	-0.91	-1.35	-1.69	-1.81	-1.57	-1.00	-0.28	+0.40	+0.84	+0.88	+0.65	999.09
July	+0.33	+0.11	+0.03	+0.07	+0.23	+0.56	+0.91	+1.08	+1.05	+0.99	+0.69	+0.27	-0.20	-0.76	-1.21	-1.69	-1.79	-1.44	-0.97	-0.43	+0.20	+0.61	+0.69	+0.53	995.41
August	+0.21	+0.01	-0.11	-0.08	+0.03	+0.32	+0.69	+0.93	+1.09	+1.01	+0.73	+0.29	-0.28	-0.80	-1.21	-1.52	-1.57	-1.33	-0.79	-0.08	+0.52	+0.72	+0.71	+0.49	994.88
September	+0.25	-0.04	-0.25	-0.23	-0.01	+0.23	+0.61	+0.96	+1.15	+1.08	+0.67	+0.15	-0.40	-0.89	-1.27	-1.35	-1.27	-1.05	-0.59	+0.04	+0.55	+0.67	+0.61	+0.48	997.73
October	+0.25	+0.01	-0.31	-0.35	-0.16	+0.05	+0.33	+0.80	+1.01	+1.00	+0.57	-0.04	-0.72	-1.16	-1.28	-1.25	-1.08	-0.67	-0.12	+0.32	+0.67	+0.77	+0.76	+0.55	1000.40
November	+0.08	0.00	-0.12	-0.13	-0.04	+0.27	+0.55	+0.87	+1.21	+1.20	+0.64	-0.09	-0.83	-1.21	-1.37	-1.32	-1.01	-0.61	-0.13	+0.17	+0.43	+0.49	+0.51	+0.35	1003.61
December	+0.13	+0.08	-0.08	-0.32	-0.27	+0.03	+0.45	+0.92	+1.43	+1.49	+0.65	-0.19	-0.84	-1.12	-1.17	-1.07	-0.87	-0.40	-0.09	+0.11	+0.32	+0.45	+0.28	+0.09	1005.58
Mean	+0.24	+0.03	-0.17	-0.24	-0.09	+0.20	+0.59	+0.92	+1.16	+1.16	+0.77	+0.16	-0.47	-0.95	-1.25	-1.39	-1.31	-0.99	-0.51	-0.01	+0.43	+0.61	+0.60	+0.45	1000.92

TEMPERATURE (°C.)

MEAN OF DAY

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
1	15.07	10.24	12.35	19.16	21.88	22.00	26.97	27.69	29.46	31.27	23.60	20.38
2	16.91	11.88	12.22	18.60	22.86	22.33	26.85	26.46	28.46	33.55	23.71	20.45
3	20.03	13.74	13.30	20.07	22.65	24.56	27.70	26.87	27.02	35.97	22.70	19.80
4	15.69	16.40	14.08	20.66	25.68	26.35	28.32	26.84	26.42	31.54	20.80	19.71
5	12.02	14.87	11.22	12.86	27.56	29.45	27.88	26.96	25.71	28.46	20.95	18.24
6	12.45	14.52	9.25	12.37	27.82	28.93	27.68	26.90	26.14	27.44	20.93	17.41
7	13.48	13.00	11.91	14.05	30.32	23.73	27.38	27.64	27.78	26.35	22.06	16.44
8	12.70	12.91	13.73	17.04	32.75	22.55	28.31	29.14	29.58	26.76	24.73	16.73
9	11.24	13.10	14.68	21.52	28.46	23.41	29.35	32.01	27.25	27.31	25.82	17.64
10	11.54	14.20	16.75	22.95	22.38	24.34	29.33	30.22	25.58	26.38	23.64	18.69
11	12.79	17.76	19.72	16.36	22.34	24.45	25.75	27.80	24.55	25.18	22.49	21.18
12	12.90	18.05	22.63	14.38	19.79	25.92	24.66	27.83	24.99	24.15	23.84	20.37
13	14.44	14.00	20.22	14.12	19.88	25.71	25.22	29.42	25.50	26.47	25.22	20.72
14	15.50	14.00	16.18	15.52	21.74	26.54	25.46	31.16	26.17	30.61	22.36	18.42
15	14.43	15.53	15.02	17.32	25.23	24.55	26.53	31.81	27.07	28.98	20.73	18.21
16	14.17	15.28	15.35	14.99	22.48	25.56	28.68	28.10	26.57	28.42	20.88	14.73
17	13.36	15.22	16.18	14.68	24.81	26.10	29.47	27.98	26.68	26.91	20.87	13.59
18	12.19	16.18	16.71	15.47	24.24	26.08	29.37	29.07	25.76	25.64	20.80	13.37
19	12.63	13.87	19.05	15.83	23.29	25.57	30.22	28.45	26.22	23.32	21.05	14.60
20	11.71	13.90	17.86	17.55	22.70	25.11	28.22	27.56	25.61	22.38	22.21	15.04
21	10.67	13.34	14.50	19.58	22.88	24.53	28.43	27.62	24.98	23.70	20.48	15.85
22	12.00	11.13	15.37	19.54	24.27	23.68	28.18	28.02	25.23	24.98	20.93	15.26
23	12.59	7.81	16.42	20.25	24.76	24.55	28.87	27.37	25.35	22.08	23.33	13.35
24	13.39	11.21	14.85	20.55	23.17	25.95	28.96	27.48	26.27	21.91	22.67	15.55
25	13.21	12.23	12.10	19.90	22.69	27.00	29.85	27.40	27.74	21.81	22.03	16.08
26	13.49	12.22	12.83	19.96	23.50	27.18	29.82	29.09	26.65	20.95	20.54	16.23
27	12.43	11.59	12.99	20.47	25.43	26.58	28.41	29.76	26.84	21.46	20.28	15.62
28	10.82	12.25	14.30	21.16	24.88	26.98	29.35	28.33	26.68	23.78	21.55	15.29
29	9.41	—	17.11	21.90	20.97	26.98	29.60	27.13	27.17	24.20	20.81	15.67
30	9.29	—	19.26	22.20	21.00	27.57	29.65	28.28	28.62	23.86	21.03	16.45
31	8.63	—	20.51	—	21.64	—	30.98	27.64	—	23.63	—	16.26
Mean .	12.94	13.59	15.44	18.03	24.00	25.47	28.24	28.32	26.60	26.11	22.10	17.01

TEMPERATURE (°C.)

Deviation from Monthly Means for every Hour

1943

Month	HOURS OF OBSERVATIONS																							Mean of Month	
	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	Midn.	
January	-1.73	-2.02	-2.49	-2.99	-3.44	-3.62	-4.01	-3.31	-1.66	-0.29	+1.60	+3.12	+3.92	+4.25	+4.24	+3.96	+3.15	+1.99	+1.18	+0.69	+0.18	-0.40	-0.87	-1.39	12.94
February	-2.16	-2.59	-3.00	-3.42	-3.79	-3.91	-3.93	-3.07	-1.33	+0.41	+1.91	+3.11	+3.90	+4.42	+4.45	+4.27	+3.49	+2.47	+1.50	+0.68	-0.03	-0.52	-1.30	-1.60	13.59
March	-2.78	-3.05	-3.47	-3.79	-4.17	-4.37	-4.06	-2.34	-0.38	+1.16	+2.45	+3.54	+4.21	+4.64	+4.72	+4.31	+3.76	+2.68	+1.36	+0.50	-0.31	-0.98	-1.51	-2.09	15.44
April	-3.39	-3.88	-4.31	-4.74	-5.27	-5.28	-4.51	-2.53	-0.33	+1.68	+3.01	+4.15	+5.06	+5.46	+5.50	+5.13	+4.55	+3.50	+2.00	+0.79	-0.39	-1.22	-2.09	-2.70	18.03
May	-4.15	-4.64	-5.08	-5.59	-6.03	-5.70	-4.39	-2.13	+0.10	+1.85	+3.35	+4.41	+5.22	+5.69	+5.97	+5.91	+5.45	+4.25	+2.63	+0.91	-0.50	-1.64	-2.55	-3.30	24.00
June	-4.42	-5.07	-5.49	-6.14	-6.52	-5.96	-4.56	-2.87	-0.85	+0.99	+2.73	+4.20	+5.39	+6.26	+6.71	+6.73	+6.17	+5.15	+3.33	+1.59	-0.01	-1.34	-2.49	-3.44	25.47
July	-4.12	-4.84	-5.60	-6.09	-6.49	-6.45	-5.39	-3.78	-1.62	+0.73	+2.60	+4.11	+5.28	+6.17	+6.56	+6.58	+6.30	+5.42	+3.72	+2.23	+0.66	-0.86	-2.07	-3.03	28.24
August	-3.60	-4.20	-4.68	-5.35	-5.67	-5.66	-4.82	-3.33	-1.36	+0.68	+2.30	+3.72	+4.89	+5.73	+5.97	+6.01	+5.63	+4.67	+3.26	+1.73	+0.24	-0.99	-2.10	-2.97	28.32
September	-3.10	-3.72	-4.18	-4.64	-5.16	-5.42	-4.34	-2.46	-0.62	+1.12	+2.64	+3.89	+4.85	+5.21	+5.27	+4.99	+4.32	+3.14	+2.16	+1.15	-0.02	-0.95	-1.68	-2.41	26.60
October	-2.92	-3.29	-3.61	-3.85	-4.11	-4.36	-3.94	-2.12	+0.12	+1.75	+3.19	+4.41	+5.08	+5.18	+4.85	+4.34	+3.38	+2.12	+1.04	-0.08	-0.86	-1.61	-2.15	-2.56	26.11
November	-2.65	-2.94	-3.28	-3.25	-3.75	-3.94	-3.79	-2.57	-0.27	+1.63	+2.88	+4.02	+4.66	+4.99	+4.88	+4.30	+3.12	+1.83	+0.72	-0.05	-0.86	-1.40	-1.91	-2.35	22.10
December	-1.91	-2.08	-2.26	-2.69	-2.86	-3.02	-3.14	-2.33	-1.03	+0.74	+1.94	+3.12	+3.68	+3.98	+3.97	+3.58	+2.58	+1.45	+0.70	+0.03	-0.53	-0.93	-1.27	-1.69	17.01
Mean	-3.08	-3.53	-3.96	-4.38	-4.77	-4.81	-4.24	-2.74	-0.77	+1.03	+2.55	+3.81	+4.68	+5.16	+5.25	+5.01	+4.32	+3.22	+1.96	+0.85	-0.21	-1.08	-1.83	-2.46	21.49

MAXIMUM AND MINIMUM TEMPERATURE (°O.)**1943**

Days of Month	January		February		March		April		May		June	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	20.2	9.1	15.7	4.0	17.0	7.8	25.4	13.2	29.0	13.1	28.7	15.7
2	21.0	11.4	17.9	5.5	16.5	8.7	26.8	10.0	30.6	14.0	29.6	15.3
3	24.3	15.8	19.3	8.8	19.5	7.0	26.7	10.5	30.7	15.4	32.2	16.8
4	24.3	9.8	21.1	12.4	19.4	9.5	31.6	14.6	34.9	17.0	34.7	18.2
5	18.4	7.3	19.0	9.3	16.5	7.3	16.7	9.2	35.9	17.7	38.7	20.4
6	17.6	7.6	20.0	10.5	13.3	5.1	18.6	6.2	36.4	16.5	38.4	20.2
7	18.6	8.6	18.5	6.5	17.9	5.0	18.9	8.0	38.5	17.9	30.6	18.1
8	17.2	7.7	18.1	7.4	21.2	5.7	23.4	9.1	39.9	24.7	29.4	17.1
9	14.3	7.9	17.4	8.2	20.4	9.8	28.0	12.7	35.6	20.1	30.3	16.5
10	17.3	7.3	20.0	8.0	23.3	10.5	30.0	16.4	29.0	16.4	31.4	17.7
11	19.0	7.9	24.2	11.2	28.1	9.9	21.5	12.1	29.4	16.9	32.4	16.4
12	19.0	9.0	23.7	12.5	28.8	12.1	18.7	10.5	26.2	13.9	32.9	17.0
13	19.6	9.0	19.2	7.9	24.0	14.5	19.8	8.0	25.0	12.8	33.7	17.2
14	21.3	8.6	20.5	8.4	22.6	11.1	20.9	8.6	28.1	15.6	35.3	18.3
15	19.6	8.6	21.7	8.9	19.8	10.2	25.0	10.4	31.5	17.4	31.2	18.0
16	19.0	10.4	22.5	9.5	20.9	9.9	20.6	10.1	28.7	15.7	32.7	18.9
17	19.4	9.4	21.6	7.7	21.6	11.4	19.7	9.6	32.1	17.5	32.9	20.1
18	18.1	7.1	22.6	10.6	22.6	10.5	21.1	10.1	27.3	20.5	33.9	17.9
19	18.8	6.6	18.7	8.5	25.1	14.0	21.7	9.1	29.3	18.4	31.7	18.9
20	17.4	7.9	18.4	9.8	21.6	14.0	24.1	10.4	28.5	16.1	31.6	17.4
21	15.2	5.9	17.5	7.0	18.7	11.1	26.4	13.1	29.6	15.9	29.9	19.1
22	16.5	7.0	15.7	6.7	19.4	11.8	27.0	13.9	29.8	18.2	29.6	17.7
23	16.2	7.5	11.7	3.4	23.4	10.5	27.0	14.5	30.7	17.6	31.0	17.5
24	16.6	8.4	15.9	6.5	20.2	10.9	28.5	13.6	28.5	16.3	33.0	19.0
25	18.4	7.8	18.0	7.0	16.0	8.5	27.2	13.7	29.1	16.7	34.9	18.9
26	20.0	7.6	16.5	7.7	18.2	7.9	26.5	13.8	31.9	14.5	34.9	20.1
27	18.6	6.8	15.7	6.6	17.5	6.5	27.4	14.1	33.6	17.2	34.5	19.6
28	16.0	6.9	16.9	7.9	20.1	8.9	27.8	14.4	35.1	14.9	34.3	19.8
29	15.1	3.5	—	—	24.6	9.2	30.1	13.9	26.8	15.2	34.8	19.0
30	14.6	3.3	—	—	26.4	12.4	30.9	13.3	27.2	15.0	35.6	19.6
31	13.6	4.5	—	—	27.4	16.0	—	—	27.3	15.3	—	—
Mean	18.23	7.94	18.86	8.16	21.03	9.93	24.60	11.57	30.85	16.59	32.83	18.21
Extreme for Month	24.3	3.3	24.2	3.4	28.8	5.0	31.6	6.2	39.9	12.8	38.7	15.3

Days of Month	July		August		September		October		November		December	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	34.0	19.3	33.8	22.4	35.9	20.8	38.1	23.6	29.9	16.8	24.7	17.2
2	34.6	19.2	32.6	20.6	34.0	21.0	39.7	29.8	29.0	18.7	25.9	15.5
3	36.0	19.5	32.8	20.6	32.3	21.2	42.6	27.7	27.8	19.9	24.8	14.0
4	36.4	19.7	33.0	21.1	31.9	21.6	37.4	25.4	26.1	15.5	24.9	14.0
5	35.4	20.5	32.6	21.4	30.8	19.4	35.4	22.2	25.4	17.1	22.3	14.8
6	34.7	20.4	34.1	20.4	31.5	20.0	34.5	21.7	25.6	16.2	22.1	12.4
7	34.4	19.7	35.0	20.9	34.7	20.4	31.6	21.5	27.9	15.7	20.9	11.2
8	36.9	20.7	36.6	20.6	37.4	24.1	33.2	20.8	33.6	17.3	22.3	10.2
9	38.4	21.1	40.0	22.3	32.8	21.0	33.7	20.9	32.6	20.3	22.7	12.4
10	37.4	20.4	36.2	22.7	30.4	19.9	31.7	21.2	28.7	20.2	25.1	12.4
11	31.8	21.4	34.1	21.8	30.0	19.4	30.6	22.2	27.6	19.0	27.0	16.9
12	31.1	19.6	34.0	21.7	30.9	18.1	28.7	19.3	31.6	17.5	27.1	13.4
13	32.6	18.2	36.4	21.7	30.6	19.3	33.5	19.6	33.5	18.0	27.2	15.7
14	32.6	19.5	38.4	22.4	33.1	19.3	38.2	22.6	25.6	19.0	23.2	13.8
15	34.0	18.9	38.9	23.7	33.9	20.6	36.0	22.7	25.7	15.2	22.7	11.7
16	36.2	20.9	35.1	22.0	32.9	21.2	36.1	23.0	25.7	16.0	19.3	11.4
17	36.2	22.1	36.0	22.2	33.8	19.9	34.0	22.1	25.7	17.2	16.9	9.5
18	35.7	22.6	36.4	23.0	31.1	19.3	31.0	22.1	25.9	15.7	16.2	9.8
19	36.9	24.1	36.6	22.9	32.8	19.6	28.0	19.0	26.6	16.1	17.9	11.1
20	35.0	21.6	34.8	21.0	31.0	20.7	26.5	17.2	30.0	16.8	18.0	12.6
21	36.3	20.9	33.7	21.7	30.7	18.5	29.1	17.6	27.2	14.3	20.0	11.5
22	35.0	21.3	34.7	22.1	30.9	19.6	31.9	20.1	26.0	15.6	19.2	12.5
23	36.4	20.8	33.6	20.5	30.9	18.9	29.9	18.0	29.7	15.0	17.5	11.7
24	37.0	21.2	34.0	22.4	32.2	19.2	27.0	16.1	28.8	17.1	19.9	10.8
25	36.6	23.2	34.4	20.0	35.4	20.6	26.8	17.6	27.7	17.6	20.4	12.4
26	36.9	21.6	36.0	21.5	33.5	19.3	25.5	15.5	26.7	15.6	21.0	10.0
27	34.6	21.6	37.2	22.2	33.4	20.7	26.1	15.7	25.3	14.9	20.4	10.2
28	36.9	20.8	34.2	21.8	34.1	20.2	30.7	17.6	27.8	17.2	19.6	10.4
29	36.6	22.4	34.0	20.9	34.1	20.6	30.4	18.3	24.8	17.5	19.4	10.1
30	37.9	20.1	35.8	22.4	35.4	20.5	30.1	19.2	25.9	17.6	21.1	13.0
31	39.7	22.2	34.3	20.3	—	—	28.7	19.4	—	—	22.6	10.2
Mean	35.92	20.82	35.14	21.65	32.75	20.16	32.15	20.64	27.81	17.02	21.69	12.54
Extreme for Month	39.7	18.2	40.0	20.0	37.4	18.1	42.6	15.5	33.6	14.3	27.2	9.5

RELATIVE HUMIDITY

MEAN OF DAY

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
1	64	69	65	47	46	47	46	56	40	34	66	70
2	56	66	61	46	48	42	46	56	49	28	67	67
3	32	64	57	44	53	42	48	58	60	21	58	70
4	46	54	62	44	43	39	44	56	55	42	72	69
5	51	68	70	64	38	32	47	54	57	58	69	67
6	64	63	54	58	30	35	48	57	54	59	63	62
7	57	66	50	52	21	54	50	55	46	60	58	66
8	66	70	53	40	13	57	50	49	42	55	44	65
9	72	59	57	22	34	51	45	31	56	56	38	62
10	57	52	46	20	56	50	42	39	60	58	69	52
11	54	34	38	41	52	48	52	56	60	69	64	40
12	66	36	32	53	56	43	49	54	63	66	48	51
13	62	46	45	54	55	45	53	54	61	52	34	43
14	48	40	64	54	57	47	55	41	58	32	58	60
15	59	48	63	52	36	52	50	32	53	45	63	77
16	59	48	63	65	57	53	41	54	47	43	61	82
17	53	55	58	59	45	48	41	63	54	57	65	87
18	51	58	54	55	51	41	39	59	61	60	62	85
19	49	70	46	57	55	49	35	61	62	60	57	70
20	61	66	55	50	52	52	47	63	66	56	51	54
21	74	59	76	45	48	51	49	62	66	54	73	58
22	71	65	74	62	36	55	54	58	65	52	67	79
23	65	86	63	60	36	56	45	60	60	70	56	94
24	59	75	61	59	39	50	47	56	60	63	42	77
25	60	63	62	59	50	49	38	59	56	58	47	71
26	60	70	55	57	43	50	37	50	58	62	69	72
27	55	63	53	55	30	50	48	42	59	59	69	69
28	53	65	46	51	35	50	50	44	58	48	63	72
29	53	—	45	48	54	55	49	60	61	49	68	69
30	57	—	34	49	53	50	47	55	50	60	66	65
31	70	—	32	—	51	—	48	52	—	62	—	56
Mean	58	60	55	51	44	48	46	53	57	53	60	67

RELATIVE HUMIDITY

Deviation from Monthly Means for every Hour

1943

Month	HOURS OF OBSERVATIONS																							Mean of Month	
	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	Midn.	
January	+ 9	+11	+13	+15	+18	+19	+21	+15	+ 7	0	- 9	-16	-20	-20	-20	-19	-15	- 8	- 4	- 4	-2	+1	+ 4	+ 7	58
February	+13	+15	+17	+19	+21	+21	+21	+15	+ 5	- 4	-11	-17	-21	-23	-23	-22	-19	-14	- 8	- 5	-1	+2	+ 8	+ 9	60
March	+15	+16	+19	+21	+23	+24	+22	+11	0	- 8	-14	-18	-22	-24	-24	-23	-21	-16	- 8	- 4	+1	+5	+ 9	+11	55
April	+18	+21	+23	+26	+29	+29	+22	+10	0	-11	-17	-21	-25	-26	-25	-24	-22	-19	-12	- 7	-1	+4	+ 9	+14	51
May	+18	+21	+23	+26	+27	+26	+19	+ 8	- 2	- 8	-14	-17	-20	-21	-22	-22	-21	-18	-13	- 8	-1	+5	+ 9	+13	44
June	+20	+24	+28	+31	+33	+30	+22	+12	+ 2	- 7	-14	-19	-23	-25	-27	-27	-26	-23	-18	-12	-5	+2	+ 8	+14	48
July	+17	+22	+26	+30	+32	+33	+28	+20	+ 9	- 4	-12	-18	-22	-25	-26	-26	-26	-23	-18	-13	-7	0	+ 6	+11	46
August	+18	+22	+24	+28	+29	+28	+24	+17	+ 6	- 4	-11	-17	-23	-26	-27	-27	-27	-24	-19	-11	-4	+2	+ 9	+14	53
September	+16	+19	+21	+23	+26	+28	+22	+12	+ 3	- 7	-15	-20	-24	-25	-25	-24	-21	-18	-14	- 9	-2	+3	+ 7	+12	57
October	+14	+16	+17	+18	+19	+21	+19	+10	+ 1	- 7	-14	-19	-21	-22	-22	-20	-17	-12	- 7	- 2	+1	+6	+10	+12	53
November	+13	+14	+16	+16	+19	+20	+18	+12	+ 1	- 7	-14	-18	-22	-24	-24	-22	-18	-12	- 6	- 2	+2	+6	+ 9	+11	60
December	+11	+11	+12	+15	+16	+16	+16	+10	+ 8	- 2	- 8	-15	-18	-20	-20	-18	-14	- 8	- 5	- 2	+1	+4	+ 6	+ 8	67
Mean	+16	+18	+20	+23	+25	+25	+22	+13	+ 4	- 5	-12	-18	-21	-32	-23	-22	-20	-16	-11	- 6	-1	+4	+ 8	+12	54

VAPOUR PRESSURE

(Millibars)

MEAN OF DAY

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
1	10.40	8.05	8.83	9.55	10.37	11.17	14.63	19.31	15.21	14.47	18.35	16.29
2	10.31	8.67	8.35	9.09	12.21	10.13	14.68	18.32	17.80	13.89	18.81	15.36
3	7.08	9.95	8.15	8.80	12.88	11.27	15.92	18.93	20.31	11.63	15.76	15.36
4	8.00	9.73	9.55	9.33	12.51	11.71	14.91	18.28	18.04	18.32	17.00	15.13
5	6.77	11.01	9.12	9.16	12.48	11.36	16.05	18.24	18.16	21.13	16.44	13.64
6	9.09	9.92	6.04	7.71	9.35	11.93	16.03	18.76	17.23	20.19	14.77	11.99
7	8.33	9.36	6.48	7.93	7.97	14.40	16.47	18.52	15.51	19.53	14.45	11.75
8	9.28	9.89	7.61	6.76	6.13	14.56	16.57	17.21	16.12	17.84	12.28	11.76
9	9.40	8.56	8.95	5.21	12.24	13.33	16.13	12.85	19.01	18.68	12.08	12.11
10	7.61	7.71	8.03	4.88	13.81	13.51	15.28	15.55	18.91	18.88	19.25	10.32
11	7.65	6.17	7.93	7.03	12.69	13.04	16.16	19.11	17.87	21.03	16.79	9.53
12	9.55	7.05	7.87	8.33	12.05	12.89	14.17	18.45	18.96	19.09	12.68	11.49
13	9.60	6.80	10.08	8.16	12.08	13.11	15.80	20.29	18.81	16.67	10.33	9.88
14	7.93	6.21	10.92	8.91	13.67	14.31	16.32	16.09	18.45	13.11	15.16	12.44
15	9.52	7.87	10.27	9.36	10.33	14.73	15.63	13.91	17.52	16.73	14.81	15.60
16	9.16	7.83	10.44	10.57	14.53	15.84	14.01	19.25	15.45	15.27	14.33	13.59
17	7.76	8.93	10.09	9.39	13.09	14.51	15.40	22.21	17.71	19.12	15.40	13.35
18	6.81	9.67	9.43	9.16	14.99	12.48	14.44	22.00	18.92	18.75	14.60	12.93
19	6.75	10.65	9.57	9.53	14.60	14.77	13.73	21.45	19.48	16.40	13.72	11.36
20	8.16	10.03	10.92	8.79	13.21	15.45	15.81	21.35	20.60	14.63	12.43	9.00
21	9.21	8.64	12.07	9.23	11.76	14.49	16.85	21.19	19.84	15.04	16.72	10.33
22	9.45	8.44	12.41	12.84	10.20	15.07	18.93	20.01	19.69	15.53	15.57	13.53
23	9.09	9.04	10.96	13.05	10.64	15.93	15.04	20.25	18.11	17.80	14.61	14.27
24	8.83	9.63	9.67	12.79	10.15	15.00	17.35	19.31	19.72	15.87	11.40	13.20
25	8.69	8.51	8.47	12.48	12.57	15.31	14.53	20.16	18.65	14.40	11.89	12.59
26	8.84	9.69	7.73	12.00	10.64	16.29	14.57	17.92	18.80	14.65	16.01	12.79
27	7.31	8.17	7.47	12.15	7.99	15.63	16.92	15.73	19.41	14.32	15.49	11.67
28	6.60	8.92	6.84	11.41	9.47	16.24	18.24	15.24	18.59	12.93	15.49	12.13
29	5.99	—	7.67	11.23	12.60	17.67	18.04	20.27	20.51	13.93	16.03	11.84
30	6.35	—	6.89	11.29	12.25	15.85	17.12	19.29	17.05	16.64	15.73	11.75
31	7.76	—	7.20	—	11.97	—	18.57	17.09	—	17.19	—	9.89
Mean	8.29	8.76	8.91	9.53	11.65	14.07	15.95	18.60	18.35	16.57	14.95	12.48

VAPOUR PRESSURE

(Millibars)

Deviation from Monthly Means for every Hour

1943

Month	HOURS OF OBSERVATIONS																							Mean of Month	
	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	Midn.	
January	+0.44	+0.52	+0.49	+0.61	+0.69	+0.64	+0.69	+0.39	+0.29	+0.05	-0.25	-0.72	-1.05	-1.00	-0.99	-0.91	-0.61	-0.05	+0.27	-0.01	+0.03	+0.12	+0.20	+0.32	8.29
February	+0.73	+0.77	+0.84	+0.76	+0.80	+0.69	+0.76	+0.63	+0.36	-0.07	-0.35	-0.97	-1.25	-1.37	-1.36	-1.32	-1.01	-0.60	-0.11	0.00	+0.20	+0.37	+0.71	+0.63	8.76
March	+1.12	+1.09	+1.16	+1.23	+1.27	+1.27	+1.13	+0.73	+0.27	-0.32	-0.81	-1.23	-1.63	-1.88	-1.97	-1.88	-1.59	-0.93	-0.16	+0.09	+0.36	+0.72	+0.89	+1.01	8.91
April	+1.64	+1.75	+1.81	+1.84	+1.93	+1.91	+1.69	+1.04	+0.57	-0.55	-1.24	-1.88	-2.39	-2.52	-2.29	-2.09	-1.99	-1.63	-0.77	-0.35	+0.28	+0.79	+1.12	+1.41	9.53
May	+2.15	+2.20	+2.24	+2.40	+2.43	+2.39	+2.23	+1.29	+0.32	-0.45	-1.53	-1.97	-2.43	-2.68	-2.93	-2.96	-2.72	-2.00	-1.35	-0.61	+0.24	+0.85	+1.37	+1.68	11.65
June	+2.72	+3.11	+3.35	+3.61	+3.63	+3.49	+3.12	+1.96	+0.93	-0.17	-1.61	-2.45	-3.17	-3.72	-4.11	-4.20	-3.88	-3.39	-2.28	-1.45	-0.20	+0.89	+1.59	+2.21	14.07
July	+2.69	+3.29	+3.64	+3.91	+4.11	+4.37	+4.25	+3.88	+2.72	+0.25	-1.32	-2.71	-3.72	-4.59	-4.81	-4.91	-4.87	-4.33	-2.89	-1.92	-0.81	+0.44	+1.37	+1.95	15.95
August	+2.92	+3.29	+3.24	+3.77	+3.51	+3.33	+3.44	+3.00	+1.73	-0.09	-1.11	-2.20	-3.53	-4.51	-4.64	-4.80	-4.85	-4.29	-2.89	-1.00	+0.13	+0.97	+2.05	+2.49	18.60
September . . .	+2.33	+2.53	+2.37	+2.43	+2.65	+2.68	+2.45	+2.07	+1.12	-0.33	-1.53	-2.64	-3.52	-3.80	-3.53	-3.21	-2.69	-2.23	-1.48	-0.61	+0.37	+1.05	+1.48	+2.08	18.35
October	+1.85	+2.08	+2.07	+1.99	+1.93	+1.97	+1.92	+1.59	+0.92	-0.33	-1.39	-2.37	-2.80	-3.09	-3.17	-2.89	-2.29	-1.59	-0.79	+0.03	+0.39	+1.04	+1.36	+1.49	16.57
November . . .	+1.21	+1.19	+1.16	+1.29	+1.51	+1.39	+1.28	+1.21	+0.87	+0.27	-0.69	-1.32	-1.93	-2.40	-2.56	-2.45	-1.91	-1.09	-0.29	+0.13	+0.44	+0.69	+0.97	+1.05	14.95
December . . .	+0.71	+0.60	+0.67	+0.80	+0.71	+0.67	+0.44	+0.16	+0.76	+0.41	-0.05	-0.73	-1.03	-1.35	-1.32	-1.11	-0.80	-0.43	-0.16	-0.15	+0.09	+0.25	+0.41	+0.44	12.48
Mean	+1.71	+1.87	+1.92	+2.05	+2.09	+2.07	+1.95	+1.49	+0.91	-0.11	-0.99	-1.76	-2.37	-2.75	-2.80	-2.72	-2.43	-1.88	-1.07	-0.48	+0.13	+0.68	+1.13	+1.40	13.17

WIND

Velocity in kilometres per hour.

Direction in degrees E. of N. for 8, 11, 14, 17 and 20 hours

1943

January

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
	o		o		o		o		o	
1	20	1	0	13	20	13	20	9	0	10
2	270	1	180	12	250	6	180	8	160	10
3	160	19	160	19	160	13	135	11	110	21
4	200	18	200	29	200	33	200	24	200	17
5	135	14	180	18	270	36	290	13	290	2
6	290	3	200	6	290	17	o	12	45	22
7	45	9	45	28	45	21	45	17	20	16
8	45	5	290	11	o	10	o	8	340	6
9	—	o	135	8	160	9	160	9	160	9
10	135	11	180	21	200	22	200	14	160	9
11	160	16	200	18	250	21	270	14	290	5
12	160	7	180	4	270	8	340	7	o	11
13	45	2	160	6	200	6	180	5	160	8
14	135	9	160	28	225	28	180	18	290	12
15	135	7	180	11	290	10	290	6	340	7
16	110	11	180	15	225	20	200	12	160	14
17	135	11	180	12	180	7	290	15	290	8
18	110	7	160	18	270	19	270	14	290	6
19	110	10	160	12	225	17	225	12	200	8
20	160	12	160	24	290	26	315	24	340	5
21	110	8	225	8	180	5	135	6	340	11
22	90	9	200	5	290	10	315	8	340	5
23	45	6	340	14	340	16	340	18	340	11
24	o	14	340	29	340	20	20	16	20	14
25	20	2	20	17	o	16	o	18	o	17
26	—	o	290	7	160	4	290	8	o	7
27	110	6	180	19	225	24	250	20	270	12
28	160	9	200	20	250	30	270	26	270	5
29	135	17	225	26	270	31	270	25	270	16
30	160	11	250	27	270	35	270	30	290	6
31	135	9	180	11	290	24	315	14	315	12

February

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
	o		o		o		o		o	
1	1	90	9	160	9	160	9	315	12	315
2	2	160	8	o	160	7	250	7	315	7
3	3	160	2	180	8	180	7	250	12	315
4	4	45	2	180	7	290	7	290	11	340
5	5	o	7	340	19	315	15	340	19	o
6	6	20	14	20	29	20	29	25	20	22
7	7	315	4	o	18	o	18	o	16	340
8	8	o	9	340	3	315	19	o	18	o
9	9	—	o	340	1	315	18	290	21	315
10	10	45	2	315	2	315	2	290	17	290
11	11	110	3	110	3	110	2	250	7	315
12	12	180	4	180	4	180	2	290	14	180
13	13	135	8	135	8	135	7	225	12	225
14	14	135	12	135	12	135	12	200	5	250
15	15	110	16	110	16	110	16	225	11	225
16	16	110	20	110	20	110	15	180	19	270
17	17	110	24	110	24	110	20	250	29	315
18	18	110	28	110	28	110	20	270	15	340
19	19	110	32	110	32	110	16	225	11	225
20	20	110	36	110	36	110	16	250	11	250
21	21	110	40	110	40	110	20	290	31	340
22	22	110	44	110	44	110	20	340	23	340
23	23	110	48	110	48	110	12	340	18	340
24	24	110	52	110	52	110	7	290	9	315
25	25	110	56	110	56	110	12	290	22	315
26	26	110	60	110	60	110	9	290	22	315
27	27	110	64	110	64	110	12	340	23	340
28	28	110	68	110	68	110	18	340	20	340
29	29	110	72	110	72	110	20	20	26	27
30	30	110	76	110	76	110	20	20	26	27
31	31	110	80	110	80	110	21	26	o	29

March

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
	o		o		o		o		o	
1	340	2	340	6	315	21	315	25	o	11
2	—	o	270	27	270	19	290	17	315	7
3	90	12	180	19	225	11	200	6	o	o
4	—	o	225	2	340	8	315	18	315	27
5	—	o	315	29	315	18	315	37	315	44
6	315	1	290	35	290	25	290	21	340	10
7	—	o	315	8	20	16	45	26	45	16
8	o	2	225	5	20	13	o	18	20	29
9	45	9	45	24	45	14	o	15	o	21
10	70	28	270	7	20	16	20	22	45	31
11	—	o	315	11	290	8	45	33	45	45
12	110	14	180	10	200	19	180	10	135	19
13	o	2	290	22	290	26	315	25	340	22
14	20	2	200	9	270	18	250	11	o	16
15	20	2	270	11	290	15	315	15	o	15
16	45	1	290	10	315	9	315	13	20	27
17	o	12	20	9	20	15	340	23	o	25
18	45	20	45	9	o	13	o	15	20	22
19	70	2	200	15	180	23	160	39	315	31
20	200	24	200	43	200	35	250	23	250	27
21	225	21	270	50	270	40	270	48	270	31
22	270	17	270	28	290	20	315	11	o	12
23	70	2	200	7	315	3	290	14	o	21
24	340	2	270	14	270	26	315	30	315	20
25	290	15	270	31	290	35	315	35	290	27
26	270	3	290	32	315	40	315	38	315	21
27	340	2	290	12	315	15	340	14	340	7
28	45	20	20	28	45	31	20	25	45	39
29	45	20	45	26	20	31	20	22	20	22
30	45	22	45	38	45	31	45	25	20	19
31	20	11	20	35	20	29	o	25	45	21

April

Date	8		11		14
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WIND

Velocity in kilometres per hour.

Direction in degrees E. of N. for 8, 11, 14, 17, and 20 hours

1943

May

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
1	290	6	0	27	315	23	340	24	0	24
2	315	15	0	29	0	22	0	24	0	30
3	0	12	0	21	0	22	20	23	0	16
4	0	10	20	37	20	22	20	30	20	39
5	20	9	45	4	315	15	0	23	20	36
6	315	8	20	17	45	14	0	26	20	27
7	290	4	70	20	20	21	20	18	45	29
8	200	11	225	11	315	20	340	13	20	13
9	290	18	290	21	315	20	315	27	340	30
10	0	10	315	21	340	19	315	18	340	26
11	340	4	290	16	315	22	315	30	340	19
12	290	11	290	18	315	17	315	28	340	27
13	290	3	290	8	315	15	340	10	340	17
14	315	1	225	8	290	11	315	9	0	13
15	90	20	180	8	225	14	200	10	135	14
16	315	10	315	12	315	17	315	20	340	22
17	45	15	340	6	290	13	340	16	20	26
18	315	16	315	28	45	25	45	35	20	12
19	20	11	340	24	0	24	340	22	0	27
20	20	13	340	29	0	22	340	20	0	24
21	0	16	340	28	340	26	0	29	20	25
22	45	30	0	27	20	27	20	30	45	29
23	45	16	20	19	0	16	315	21	20	31
24	45	5	315	11	290	21	340	22	340	13
25	0	14	340	23	0	19	0	22	0	27
26	20	17	20	20	0	20	0	25	20	34
27	45	13	20	20	0	23	20	20	45	31
28	315	6	225	4	290	8	290	37	340	33
29	315	6	290	17	315	19	290	27	340	32
30	20	3	315	19	270	18	315	22	340	25
31	340	10	340	17	290	16	315	18	315	23

June

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
	o		o		o		o		o	
1	315	10	340	24	340	22	340	28	340	22
2	20	26	20	33	o	28	o	30	o	19
3	20	20	20	35	o	32	o	28	20	23
4	45	25	20	36	20	36	20	34	20	27
5	45	41	45	55	45	37	20	40	45	53
6	45	30	20	46	o	36	o	33	o	27
7	340	22	o	23	340	26	o	30	340	27
8	340	20	315	19	315	23	315	32	315	29
9	o	13	340	18	o	17	o	22	20	24
10	340	17	o	21	315	20	340	19	340	29
11	340	13	340	24	340	23	340	29	o	24
12	340	9	o	25	340	20	o	22	o	28
13	o	15	340	23	o	20	340	24	340	25
14	o	19	340	26	o	27	340	35	o	22
15	340	15	290	25	315	27	315	33	315	21
16	290	9	290	13	315	18	315	26	315	21
17	315	10	340	12	290	20	290	22	340	25
18	290	12	340	12	315	22	315	23	o	29
19	315	17	315	20	290	26	315	29	340	23
20	o	7	o	20	o	20	315	20	o	27
21	o	16	315	28	290	22	315	27	315	24
22	340	14	340	16	o	20	340	25	340	31
23	340	18	o	22	340	19	340	22	o	25
24	340	14	o	17	340	19	o	22	o	30
25	340	16	o	28	340	24	o	27	o	30
26	o	22	340	24	340	23	340	24	340	32
27	315	12	o	20	340	19	340	27	340	25
28	340	9	315	18	315	23	290	30	315	27
29	315	9	315	15	340	21	340	18	340	24
30	o	10	340	27	o	20	340	24	340	32

July

Date	8		11		14		17		20		
	Dir.	E. of N.	Vel. Kms. P.H.	Dir.	E. of N.	Vel. Kms. P.H.	Dir.	E. of N.	Vel. Kms. P.H.	Dir.	E. of N.
1	o	18	340	26	340	23	340	30	o	29	
2	315	14	340	26	340	27	340	27	o	27	
3	340	11	340	22	340	38	340	38	340	31	
4	340	10	340	29	340	30	340	37	340	27	
5	315	11	290	15	315	27	315	27	315	27	
6	340	11	340	20	o	15	340	17	o	24	
7	315	12	290	15	315	22	315	28	315	25	
8	315	8	290	7	290	19	315	30	o	20	
9	o	1	290	9	290	21	315	29	340	17	
10	290	4	290	18	290	23	315	19	o	17	
11	o	12	290	18	290	21	315	27	315	33	
12	340	22	315	24	340	22	315	27	340	31	
13	340	17	340	21	315	19	315	25	315	28	
14	340	13	340	17	o	16	315	20	315	31	
15	315	6	290	13	290	16	340	13	o	13	
16	290	14	315	17	340	25	340	17	340	13	
17	290	13	290	17	290	17	315	15	315	14	
18	315	15	315	18	315	15	315	22	340	25	
19	315	6	340	14	290	20	315	22	o	30	
20	20	25	o	22	o	20	o	22	o	28	
21	20	23	o	24	20	21	o	21	o	29	
22	o	11	340	14	o	20	315	21	340	23	
23	315	6	290	16	290	17	290	16	340	14	
24	290	3	270	7	290	16	315	17	340	31	
25	315	10	270	11	290	21	315	22	o	16	
26	340	2	290	10	340	13	315	15	o	32	
27	o	9	315	18	290	18	290	17	o	13	
28	340	5	o	20	o	18	o	22	o	26	
29	315	15	340	20	o	20	o	21	o	20	
30	340	11	340	18	o	21	340	25	340	24	
31	315	16	o	19	315	19	o	21	o	23	

August

Date	8			11			14			17			20		
	Dir.	E.	Vel.												
	of N.	Kms. P.H.													
1	o	16	340	13	315	25	315	24	340	24	340	29	340	28	28
2	340	15	290	15	315	19	315	17	315	17	315	15	315	15	32
3	290	7	290	14	340	16	340	15	340	15	340	15	340	16	22
4	o	6	290	13	315	17	315	16	340	16	340	16	340	16	22
5	290	8	270	13	290	17	315	17	340	17	340	17	340	17	28
6	290	8	290	16	290	25	315	25	340	25	340	25	340	25	22
7	315	6	290	22	315	21	315	22	340	22	340	21	340	21	21
8	315	6	290	9	290	12	290	25	340	25	340	25	340	25	22
9	315	14	20	9	o	19	340	25	340	25	340	20	340	20	25
10	315	16	290	25	290	24	340	22	340	22	340	22	340	22	23
11	o	4	290	17	290	26	315	19	340	19	340	19	340	19	21
12	315	10	290	15	290	13	315	8	o	8	o	8	o	8	10
13	290	11	290	15	290	25	o	18	340	18	340	18	340	18	22
14	340	8	20	16	315	16	340	23	340	23	340	23	340	23	29
15	290	9	20	13	20	20	340	27	340	27	340	27	340	27	29
16	315	13	290	12	315	22	315	22	340	22	340	22	340	22	23
17	315	11	290	15	315	17	315	26	340	26	340	26	340	26	16
18	340	10	290	12	290	18	315	24	340	24	340	24	340	24	24
19	315	11	290	18	315	23	340	21	340	21	340	21	340	21	22
20	315	8	290	16	315	16	340	12	340	12	340	12	340	12	24
21	290	14	290	13	315	17	315	18	340	18	340	18	340	18	17
22	340	10	340	15	340	19	315	24	340	24	340	24	340	24	28
23	340	8	290	14	o	18	315	16	340	16	340	16	340	16	19
24	315	15	290	22	315	31	340	25	340	25	340	25	340	25	14
25	20	1	290	10	290	18	315	14	340	14	340	14	340	14	18
26	o	5	o	24	o	19	340	25	340	25	340	25	340	25	22
27	20	8	o	20	340	20	340	35	340	35	340	35	340	35	22
28	o	15	340	31	340	23	340	24	340	24	340	24	340	24	22
29	340	12	290	16	340	21	315	22	340	22	340	22	340	22	22
30	315	16	340	18	340	24	340	25	340	25	340	25	340	25	23
31	315	11	315	16	315	16	340	18	340	18	340	18	340	18	18

WIND

Velocity in kilometres per hour.

Direction in degrees E. of N. for 8, 11, 14, 17 and 20 hours

1948

September

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
1	340	1	250	6	270	19	0	17	20	26
2	340	4	315	22	315	23	340	24	0	21
3	340	11	0	18	315	25	340	15	0	28
4	0	18	340	22	0	25	340	26	340	28
5	340	11	290	17	290	19	0	15	340	12
6	20	1	270	15	315	9	315	17	340	9
7	—	0	270	10	290	14	340	17	20	23
8	90	8	180	16	315	19	340	24	340	19
9	340	5	315	14	315	21	340	22	0	27
10	0	11	340	17	340	20	340	15	0	27
11	315	7	315	22	290	21	340	20	340	23
12	315	6	340	17	315	22	340	20	340	26
13	340	7	340	13	290	23	340	17	0	9
14	0	10	20	13	0	15	340	25	20	20
15	20	21	20	29	20	23	0	31	20	31
16	20	31	20	34	26	0	25	0	28	28
17	20	33	20	34	340	23	340	22	0	23
18	0	14	340	12	290	24	315	18	340	21
19	340	15	315	15	315	18	0	16	340	12
20	315	12	315	21	290	15	340	17	340	19
21	340	1	290	18	315	16	315	18	340	23
22	315	5	290	17	340	20	315	18	340	19
23	340	1	315	10	315	22	340	16	340	13
24	315	5	340	15	340	15	340	20	0	15
25	0	11	340	22	340	22	340	22	0	25
26	315	7	315	18	290	21	340	22	0	20
27	0	14	340	18	0	20	340	24	20	23
28	20	11	0	22	0	24	340	25	0	19
29	0	10	340	18	340	26	340	20	0	16
30	315	8	290	12	290	15	0	10	0	17

October

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
1	315	1	250	4	290	17	110	33	110	11
2	160	7	290	12	290	14	0	12	20	29
3	90	49	160	21	200	14	250	5	110	20
4	—	0	290	22	315	13	0	12	20	12
5	0	2	340	17	340	17	0	23	0	21
6	315	15	340	21	340	15	340	24	0	25
7	45	17	0	20	340	24	0	24	20	19
8	70	8	20	16	0	26	31	0	24	20
9	20	8	20	16	0	22	340	23	0	12
10	135	16	270	24	270	24	290	35	290	29
11	315	17	315	12	290	19	315	23	340	21
12	340	3	290	12	290	17	290	16	0	21
13	315	1	290	1	290	1	340	1	340	1
14	90	1	290	1	290	1	340	1	340	1
15	0	1	290	1	290	1	340	1	340	1
16	70	24	70	70	340	8	340	4	340	20
17	70	8	340	8	340	26	26	20	25	20
18	20	36	20	28	0	19	340	23	20	21
19	0	12	0	19	340	21	340	17	0	18
20	90	1	290	9	315	17	290	12	0	30
21	340	3	290	3	290	1	340	1	340	1
22	315	1	290	1	290	1	340	1	340	1
23	340	1	340	1	340	1	340	1	340	1
24	90	1	290	1	290	1	340	1	340	1
25	0	1	290	1	290	1	340	1	340	1
26	110	7	290	15	290	12	315	10	315	10
27	—	0	315	5	290	16	340	12	0	20
28	—	0	340	6	290	12	0	16	20	23
29	—	0	290	5	45	15	0	18	45	35
30	45	37	45	35	20	13	20	35	45	36
31	45	34	45	27	20	22	20	28	20	32

November

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
1	315	7	20	12	0	15	315	17	315	12
2	340	3	290	23	315	12	290	7	0	12
3	180	20	200	20	315	23	340	20	0	12
4	0	5	270	5	315	12	340	13	0	13
5	—	0	290	9	290	18	315	16	0	18
6	20	11	20	20	20	20	20	20	20	20
7	45	24	70	26	45	26	45	21	45	34
8	90	3	135	21	315	13	0	11	20	20
9	—	0	110	2	180	4	—	0	16	20
10	0	15	340	22	0	18	340	17	0	18
11	340	12	20	20	18	0	14	20	13	45
12	45	44	70	33	70	22	45	18	45	24
13	110	6	180	10	200	4	180	8	250	1
14	340	9	315	17	315	19	0	14	340	15
15	20	10	0	22	20	0	21	20	12	0
16	20	13	20	27	20	0	27	20	15	8
17	0	11	340	23	340	26	0	25	12	340
18	0	12	20	22	23	0	21	45	23	7
19	20	18	45	27	45	24	45	41	0	45
20	90	5	90	8	20	17	20	19	45	0
21	315	8	0	19	0	27	0	29	20	40
22	0	25	20	22	0	20	17	25	20	11
23	0	8	70	30	45	23	45	17	45	1
24	290	2	290	7	290	7	250	5	135	1
25	—	0	160	12	160	8	—	0	22	0
26	20	11	290	10	315	22	0	15	0	13
27	45	25	45	21	45	16	20	18	0	12
28	45	29	45	12	270	10	20	45	29	8
29	45	12	20	29	20	45	16	45	7	340
30	45	35	45	44	45	28	20	27	20	11

December

Date	8		11		14		17		20	
	Dir. E. of N.	Vel. Kms. P.H.								
1	45	21	20	34	20	27	0	26	20	26
2	45	13	20	19	70	16	45	13	45	25
3	340	6	20	14	0	24	20	23	20	10
4										

WIND VELOCITY
(Kilometres per hour)

MEAN OF DAY

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
1	12.2	9.3	8.6	16.8	18.0	17.0	19.2	18.0	14.9	11.7	11.0	25.5
2	9.2	4.1	9.0	17.8	19.4	21.6	18.5	14.7	17.5	24.2	7.6	16.9
3	18.1	7.2	8.1	13.3	18.9	23.2	21.8	12.5	18.2	24.5	14.6	15.5
4	24.0	6.0	9.4	27.8	22.5	31.6	20.7	13.4	18.8	10.1	8.1	16.3
5	14.3	14.0	16.7	13.0	19.9	44.0	18.1	12.2	13.0	15.3	10.3	21.0
6	11.5	21.3	12.2	13.6	15.4	29.7	15.7	15.5	9.8	16.5	15.7	15.9
7	18.2	11.4	17.6	9.3	17.6	23.0	17.3	15.5	13.9	18.9	22.7	10.4
8	8.2	11.8	15.5	11.4	16.8	19.8	16.0	11.2	13.8	15.5	11.6	13.4
9	6.1	14.1	18.5	14.1	18.4	16.6	13.2	17.6	13.9	14.0	6.8	13.2
10	15.2	17.9	21.7	28.2	16.5	18.1	14.0	18.8	15.7	20.2	17.8	11.0
11	13.2	11.0	14.7	17.8	17.0	18.1	21.1	14.5	14.0	17.9	15.0	28.5
12	7.2	10.5	11.5	20.4	14.4	15.4	20.3	10.2	13.5	11.7	22.5	7.7
13	7.3	9.9	15.1	12.0	10.6	17.4	16.7	12.9	12.7	8.8	5.6	7.5
14	16.5	8.1	9.4	11.8	11.1	22.0	17.0	17.8	16.1	5.0	14.4	8.2
15	9.0	7.4	8.4	13.2	11.4	17.0	11.7	16.0	21.2	16.2	15.5	12.2
16	12.9	9.0	12.5	14.9	15.2	14.6	12.3	16.1	25.8	23.5	18.6	9.8
17	10.2	16.6	18.8	10.7	13.8	15.3	13.6	15.3	21.1	29.1	19.2	7.7
18	9.6	25.5	17.4	9.3	16.5	15.3	15.9	13.8	13.3	27.5	18.7	5.8
19	10.6	16.5	23.6	13.7	20.6	16.8	18.2	15.6	12.6	16.0	27.0	12.0
20	14.9	13.5	22.7	17.4	19.5	17.2	19.4	12.5	13.0	9.6	16.1	20.7
21	5.7	7.6	30.2	24.3	20.8	20.1	21.7	14.0	12.6	13.5	18.7	29.0
22	6.6	21.1	19.0	23.1	24.8	18.1	14.5	14.6	12.5	23.9	15.8	18.9
23	12.3	28.5	11.2	17.8	17.6	17.3	12.8	13.9	11.4	7.4	19.1	7.5
24	16.4	11.2	15.5	14.5	17.5	17.9	13.1	15.5	14.6	7.4	8.0	20.4
25	15.0	11.0	21.2	16.2	17.3	20.6	13.8	10.5	16.4	11.7	10.4	29.7
26	8.4	10.4	18.7	16.2	21.1	21.2	13.9	14.5	14.3	8.3	11.5	17.7
27	11.8	9.4	10.9	19.0	22.0	18.0	13.7	18.5	17.3	8.8	20.8	12.6
28	13.5	9.4	26.2	16.4	14.5	18.0	16.5	17.6	15.6	16.3	25.0	8.7
29	17.4	—	24.6	22.5	16.7	14.8	16.8	15.5	15.1	17.2	25.9	5.8
30	16.1	—	23.2	19.8	14.3	18.5	16.6	16.9	12.4	34.9	35.0	9.4
31	11.4	—	25.8	—	14.4	—	16.2	14.7	—	30.7	—	12.9
Mean	12.4	12.6	16.7	16.5	17.2	19.9	16.5	14.8	15.2	16.7	16.3	14.6

WIND VELOCITY

(Kilometres per Hour)

Deviation from Monthly Means for every Hour

1943

Month	HOURS OF OBSERVATIONS																							Mean of Month	
	1	2	3	4	5	6	7	8	9	10	11	Noon	13	14	15	16	17	18	19	20	21	22	23	Midn.	
January	-0.5	-1.1	-2.5	-2.7	-2.9	-3.3	-4.3	-3.9	-2.7	-1.7	+3.6	+4.2	+5.1	+5.6	+6.1	+4.2	+1.8	+0.2	-0.8	-2.0	-0.9	-1.0	-0.6	-0.8	12.4
February	-1.1	-1.8	-2.0	-2.8	-3.7	-4.4	-4.8	-5.7	-2.7	-2.5	+2.0	+3.9	+4.3	+4.1	+4.7	+4.5	+3.5	0.0	-1.3	+0.9	+3.4	+2.3	+0.3	-0.6	12.6
March	-3.0	-4.7	-6.2	-7.8	-8.1	-8.4	-9.3	-8.1	-2.9	-3.3	+2.9	+2.2	+2.6	+4.0	+5.7	+7.1	+5.8	+5.1	+4.8	+5.4	+6.1	+5.6	+3.4	+1.2	16.7
April	-3.8	-4.4	-5.6	-6.0	-7.0	-8.0	-8.2	-6.6	-3.6	-2.5	+4.4	+3.9	+4.5	+5.1	+6.5	+6.4	+6.6	+6.9	+6.1	+6.0	+3.6	+1.0	-1.8	-2.8	16.5
May	-2.7	-3.3	-4.4	-6.6	-8.2	-8.8	-7.8	-6.1	-3.3	-4.5	+1.2	+0.2	+0.6	+1.9	+2.8	+3.6	+5.3	+6.1	+6.7	+7.8	+9.0	+7.2	+4.3	-0.2	17.2
June	-4.3	-5.3	-7.0	-8.2	-8.5	-10.1	-7.2	-3.6	-1.6	-3.2	+4.3	+2.1	+3.1	+3.8	+4.8	+5.5	+6.9	+7.6	+7.7	+6.9	+4.8	+3.1	+1.1	-1.7	19.9
July	-3.7	-5.7	-6.9	-7.7	-9.3	-10.0	-7.7	-5.1	-3.7	-4.6	+1.1	+0.7	+1.7	+4.1	+5.3	+6.5	+6.4	+7.1	+7.0	+7.4	+7.8	+5.5	+3.0	-0.1	16.5
August	-4.4	-6.0	-6.9	-7.2	-8.4	-8.9	-7.8	-4.7	-2.7	-3.2	+1.2	+1.7	+3.0	+5.1	+5.0	+6.6	+6.3	+6.5	+5.5	+7.7	+7.1	+4.2	+2.3	-0.7	14.8
September	-3.0	-4.1	-5.0	-7.9	-8.5	-8.7	-8.3	-5.2	-3.2	-2.5	+2.7	+2.4	+3.3	+5.0	+5.9	+5.8	+4.7	+3.7	+3.4	+5.5	+6.2	+4.0	+3.1	-0.2	15.2
October	+0.9	-0.6	-2.8	-2.6	-2.5	-3.5	-4.2	-3.7	-3.1	-4.4	-1.9	-3.1	-1.9	-0.4	+1.7	+1.5	+1.8	+1.9	+3.6	+4.3	+6.1	+5.7	+3.1	+3.0	16.7
November	-1.3	-2.3	-3.4	-5.3	-6.1	-5.9	-4.2	-3.5	-0.5	-1.1	+2.9	+1.2	+1.3	+1.8	+2.4	+1.7	+0.3	+1.1	+4.0	+5.0	+4.8	+3.9	+2.7	+0.8	16.3
December	-1.1	-1.7	-1.9	-2.6	-3.5	-3.5	-4.0	-5.3	-3.2	-3.3	+4.6	+3.4	+3.4	+2.5	+2.2	+1.9	+0.6	+1.3	+2.3	+2.9	+3.5	+1.9	-0.3	-0.3	14.6
Mean	-2.4	-3.4	-4.6	-5.6	-6.4	-7.0	-6.5	-5.1	-2.8	-3.1	+2.4	+1.9	+2.6	+3.5	+4.4	+4.6	+4.2	+3.8	+4.0	+4.8	+5.1	+3.7	+1.9	-0.2	15.8

CLOUDS (scale 0—10)

1943

January

Date	Hours of Observation					Mean	Date	Hours of Observation					Mean
	8	11*	14	17*	20			8	11*	14	17*	20	
1	3 Sc.	1 Sc.	1 Cu.	o —	o —	1'3	1	2 St.	1 St.	5 Cu.	4 Sc.	o —	2'7
2	8 Ac.	5 Ac.	7 Ac.	3 Ac.	3 Ac.	6'0	2	1 Ci., Ac.	9 Ac.	2 Ac.	6 Ac.	10 Ac.	4'3
3	10 Cc.	10 Cc.	10 Ac., As.	10 Ac.	10 Ac.	10'0	3	8 Ac.	7 Sc., Cu.	9 Cb.	10 Sc.	10 Sc.	9'0
4	o —	o —	o —	o —	o —	o'0	4	9 Sc.	3 Ac., Cu.	5 Cu.	2 Cu.	o —	4'7
5	o —	o —	o —	o —	o —	o'0	5	4 Cu.	1 Cu.	4 Cu.	3 Cu.	o —	2'7
6	1 Ac.	2 Ac.	7 Cb.	8 Cu.	2 Sc.	3'3	6	5 Ac.	2 Ci., Ac.	o —	o' —	o —	1'7
7	o —	1 Ce.	o —	1 Ci.	o —	o'0	7	o —	6 Ci.	o —	o —	o —	o'0
8	7 Ac.	4 Ce.	3 Cu.	4 Cu.	6 Cu.	5'3	8	o —	4 Cu.	4 Cu.	4 Ci., Cu.	o —	1'3
9	9 Ac., As.	10 Ac., As.	10 Ac.	4 Ac.	o —	6'3	9	1 Ac.	o —	5 Sc., Cu.	2 Ac.	o —	2'0
10	o —	o —	o —	o —	8 Ac.	2'7	10	9 Ci.	3 Ci.	o —	o —	o —	3'0
11	6 Ci, Ac, St.	4 Ac.	4 Cu.	1 Ac.	o —	3'3	11	3 Sc.	7 Cs.	7 Sc.	8 Sc.	9 Sc.	6'3
12	6 Ac.	o —	7 Cb.	2 Cc.	6 Cs.	6'3	12	10 Sc.	10 Sc.	6 Ac.	8 Ac.	7 Ac.	7'7
13	o —	o —	o —	o —	o —	o'0	13	3 Ci.	o —	3 Ci.	6 Ci.	4 Ci.	3'3
14	3 Ci.	5 Ci.	2 Ci.	8 Ac.	10 Ac.	5'0	14	o —	o —	o —	o —	o —	o'0
15	o —	o —	6 Cu.	7 Gu.	6 Cu.	4'0	15	4 Ac.	o —	1 Cu.	o —	o —	1'7
16	1 Ci., Ac.	o —	o —	o —	o —	o'3	16	6 Ac.	6 Ac.	2 Ac., Cu.	o —	4'0	
17	10 Ci.	8 Ci.	4 Cu.	o —	o —	4'7	17	o —	o —	1 Ci.	7 Ci.	2'3	
18	3 Ac.	1 Ac.	8 Cu.	8 Cu.	8 Ci., Ac.	6'3	18	2 Ci., Ac.	2 Ci.	o —	o —	o —	0'7
19	o —	1 Ac.	5 Cu.	7 Ac.	6 Ac.	3'7	19	o —	4 Cu.	6 Cu.	2 Cu.	7 Cu.	4'3
20	9 Sc.	3 Ac., Cu.	9 Cb.	6 Sc., Cu.	o —	6'0	20	6 Ac., Cu.	7 Cu.	7 Cu.	3 Cu.	o —	4'3
21	6 Ac.	10 Sc., Cu.	10 Cb.	7 Cb.	10 Ac.	8'7	21	5 Ac.	5 Cu.	2 Cu.	7 Ci., Ac.	7 Ac.	4'7
22	4 Cu.	3 Cu.	4 Cu.	6 Cu.	7 Cu.	5'0	22	4 Ac.	8 Sc., Cu.	10 Cb.	5 Cb.	10 Cb.	6'7
23	8 Cu.	7 Cu.	8 Cu.	4 Cu.	8 Cu.	8'0	23	10 Cb.	10 Cb.	4 Cb.	2 Cu.	4 Cb.	5'0
24	10 Ac.	8 Ac., Cu.	10 Ac., Cu.	10 Cb.	8 Sc.	9'3	24	9 Sc.	6 Sc., Cu.	7 Cu.	2 Cu.	3 Ac.	5'3
25	o —	2 Cu.	o —	o —	o —	o'0	25	7 Sc.	o —	2 Cu.	3 Cu.	3 Cu.	3'0
26	o —	o —	o —	o —	o —	o'0	26	o —	3 Cu.	4 Cu.	3 Cu.	3 Cu.	1'3
27	o —	o —	o —	o —	o —	o'0	27	4 Ac.	o —	3 Cu.	4 Ac.	4 Ac.	2'3
28	10 Sc.	9 Sc.	7 Cu.	7 Sc.	o —	5'7	28	9 Sc.	10 Sc., Cu.	7 Sc.	4 Ac.	4 Ac.	5'3
29	o —	o —	3 Cu.	7 Cu.	6 Cu.	3'0							
30	1 Ac.	3 Ac., Cu.	4 Cu.	7 Cb.	o —	1'7							
31	10 Sc.	10 Sc., Cu.	8 Cb.	4 Ac.	o —	6'0							
Mean	4'0	3'5	4'4	3'9	3'4	3'9	Mean	4'3	4'1	3'9	3'5	2'4	3'6

March

Date	Hours of Observation					Mean	Date	Hours of Observation					Mean
	8	11*	14	17*	20			8	11*	14	17*	20	
1	10 Sc.	7 Sc., Cu.	6 Cu.	3 Cu.	2 Ac.	6'0	1	o —	o —	o —	o —	o —	o'0
2	1 Ac.	9 Sc., Cb.	6 Cu.	10 Sc., Cb.	4 As.	3'7	2	3 Ac.	8 Cs.	9 Cu.	3 Cu.	o —	4'0
3	o —	1 Ac.	5 Sc., Cu.	4 Ac.	o —	1'7	3	1 Ci.	2 Ci.	7 Ci.	10 Sc.	6 Cs.	4'7
4	o —	o —	6 Cu.	8 Sc.	5 Ac.	3'7	4	10 As.	o —	o —	o —	9 Sc.	6'3
5	o —	7 Cu.	7 Cu.	8 Cu.	3 Cu.	3'3	5	o —	10 Sc., Cu.	9 Cb.	9 Cb.	6 Sc.	5'0
6	10 Sc.	7 Cu.	4 Cu.	3 Cu.	3 Cu.	5'7	6	o —	5 Cu.	7 Cu.	8 Sc.	4 Sc.	3'7
7	o —	9 Ci., Cu.	9 Cs.	o —	3'0	7	o —	7 Cu.	3 Cu.	o —	o —	o —	1'0
8	4 Ci.	o —	2 Ci.	2 Ci.	2'0	8	o —	o —	o —	o —	o —	o —	o'0
9	6 Ci.	8 Ci.	8 Ci.	10 Ac.	4 Ac.	6'0	9	o —	o —	o —	o —	o —	o'0
10	o —	o —	o —	o —	o —	o'0	10	o —	o —	o —	o —	o —	o'0
11	8 Ci.	9 Ci.	9 Ci.	2 Ci.	o —	5'7	11	o —	o —	o —	o —	5 Ac.	1'7
12	4 Ci.	9 Ci.	8 Cs.	9 Cs.	8 Cs.	6'7	12	8 Sc., Cb.	9 Cu.	8 Sc.	6 Cu.	o —	5'3
13	2 Ac.	o —	o —	o —	o —	o'7	13	7 Ac.	8 Sc.	6 Cu.	o —	o —	4'3
14	o —	1 Ci., Ac.	8 Cb.	8 Cb.	3 Ac.	3'7	14	o —	o —	4 Cu.	3 Cu.	o —	1'3
15	2 Cu.	8 Cu.	8 Ac., Cu.	8 Sc., Cu.	o —	3'3	15	o —	4 Cu.	3 Cu.	4 Cu.	o —	1'0
16	1 Ac.	2 Cu.	6 Cu.	2 Cu.	o —	2'3	16	o —	7 Cu.	8 Cu.	6 Cu.	o —	2'7
17	1 Ac.	1 Ac., Cu.	2 Cu.	3 Ac., Cu.	o —	1'0	17	o —	8 Cu.	7 Cu.	6 Cu.	o —	2'3
18	1 Ci.	5 Ci.	8 Cs.	3 Ac.	6 Ac.	5'0	18	o —	8 Cu.	4 Cu.	5 Cu.	o —	1'3
19	10 Sc.	10 Sc.	4 Ac.	o —	6'7	19	o —	7 Cu.	4 Cu.	4 Cu.	4 Cu.	o —	1'7
20	o —	2 Cu.	8 Cu.	7 Cu.	5'0	20	o —	o —	2 Cu.	3 Cu.	3 Cu.	o —	0'7
21	10 Ns.	9 Sc., Ns.	10 Ns.	10 Sc.	10'0	21	o —	o —	o —	o —	3 Cu.	o —	0'0
22	9 Ns.	9 Cb.	7 Cb.	5 Sc., Cu.	3 Ac.	6'3	22	8 St.	1 Ci.	o —	1 Ci.	o —	2'7
23	o —	1 Ac., Cu.	2 Ac.	3 Ac.	o —	0'7	23	o —	o —	o —	o —	o —	0'0
24	1 St.	8 Cu.	5 Cu.	6 Sc., Cu.	o —	2'0	24	2 Ci.	3 Ci., Cc.	4 Ci.	1 Ce.	o —	2'0
25	9 Sc., Cb.	9 Cu., Cb.	7 Cu.	7 Cu., Cb.	7 Sc.	7'7	25	o —	o —	o —	o —	o —	0'0
26	o —	7 Cu.	4 Cu.	4 Cu.	o —	1'3	26	2 Cu.	o —	o —	o —	o —	0'7
27	o —	4 Cu.	3 Cu.	o —	o —	1'0	27	2 St.	o —	o —	3 Cu.	3 Cu.	1'7
28	o —	o —	o —	o —	o —	o'0	28	o —	o —	o —	o —	o —	0'0
29	o —	o —	o —	o —	o —	o'0	29	o —	o —	o —	o —	o —	0'0
30	o —	o —	o —	o —	o —	o'0	30	o —	o —	o —	o —	o —	0'0
Mean	3'1	4'7	5'2	4'5	2'2	3'5	Mean	1'4	2'9	3'0	2'5	1'0	1'8

* Additional observations not used in the daily mean.

CLOUDS (scale 0-10)

1943

May						June							
Date	Hours of Observation					Mean	Date	Hours of Observation					Mean
	8	11*	14	17*	20			8	11*	14	17*	20	
1	o	—	2 Ci.	6 Cs.	5 Cs.	3'0	1	o	—	o	—	o	o'0
2	o	—	o	—	o	o'0	2	o	—	o	—	o	o'0
3	I St.	1 Ci.	o	—	1 Ci.	o	3	o	—	o	—	o	o'0
4	o	—	o	—	o	o'0	4	o	—	o	—	o	o'0
5	o	—	o	—	2 Ci.	o	5	o	—	o	—	o	o'0
6	1 Ci.	3 Ci.	1 Ci.	o	o	o'7	6	o	—	o	—	o	o'0
7	o	—	o	—	o	o'0	7	3 Sc.	o	—	o	—	1'0
8	o	—	o	—	o	o'0	8	6 Cu.	o	—	o	—	2'0
9	o	—	o	—	o	o'0	9	6 Cu.	o	—	o	—	2'0
10	o	—	o	—	o	o'0	10	o	—	o	—	o	o'0
11	o	—	4 Ci.	6 Ci.	4 Ci.	2'7	11	o	—	o	—	o	o'0
12	9 Sc., Cu.	o	—	o	—	3'0	12	o	—	o	—	o	o'0
13	1 Ci.	4 Cu.	7 Cu.	6 Cu.	o	—	13	o	—	o	—	o	o'0
14	6 Cu.	o	—	2 Cu.	7 Cc.	6 Cs., Ac.	14	o	—	o	—	o	o'0
15	3 Ci., Ac.	7 Ci., Ac.	9 Ci., Ac.	10 Ac., As.	10 Ac.	7'3	15	o	—	o	—	o	o'0
16	3 Ac.	4 Ci.	9 Ci., Ac.	10 Ac., As.	5 Ac.	5'7	16	6 Sc.	o	—	o	—	2'0
17	o	—	4 Ci.	10 Cs., Ac.	10 As.	6'7	17	o	—	o	—	o	o'0
18	9 Ac.	10 Ac.	10 Ac.	10 Ac.	10 Ac.	9'7	18	o	—	o	—	o	o'0
19	8 Ac.	6 Ac.	6 Ci.	10 Ci., Ac.	9 Ci., Ac.	7'7	19	o	—	o	—	o	o'0
20	4 Ci	4 Ci.	4 Ci.	2 Ci.	o	—	20	o	—	o	—	o	o'0
21	3 Ci., St	3 Ci.	3 Ci.	1 Ci.	o	—	21	o	—	o	—	2 Cu.	o'7
22	9 Ac.	10 Ac.	10 Ac.	10 Ac., As.	6 Sc.	8'3	22	2 Cu.	1 Cu.	2 Cu.	3 Cu.	1'3	
23	o	—	o	—	3 Cu.	o	23	6 Cu.	o	—	o	—	2'0
24	o	—	o	—	o	o'0	24	o	—	o	—	o	o'0
25	6 Cu.	o	—	o	o	—	25	o	—	o	—	o	o'0
26	3 Ce.	1 Ci.	1 Cc.	2 Ac.	1 Ac.	1'7	26	o	—	o	—	o	o'0
27	o	—	o	—	o	o'0	27	o	—	o	—	o	o'0
28	o	—	o	—	1 Ac.	o	28	o	—	o	—	o	o'0
29	4 Cu.	5 Cu.	4 Cu.	3 Cu.	o	—	2'7	29	o	—	o	—	o'0
30	5 Cu.	5 Cu.	5 Cu.	4 Cu.	o	—	3'3	30	o	—	o	—	o'0
31	4 Cu.	o	—	2 Ac.	o	—	1'3	o	—	o	—	o	o'0
Mean	2'5	2'4	3'0	3'3	2'0	2'5	Mean	1'0	0'0	1'0	2'0	0'0	0'4

		Hours of Observation							Hours of Observation						
Date		8	11*	14	17*	20	Mean	Date	8	11*	14	17*	20	Mean	
1	o	—	o	—	o	—	o	1	o	—	o	—	o	—	
2	o	—	o	—	o	—	o	2	3 Cu.	2 Cu.	o	—	o	—	
3	o	—	o	—	o	—	o	3	8 Cu., St.	o	—	o	—	o	
4	o	—	o	—	o	—	o	4	2 Cu.	o	—	o	—	o	
5	o	—	o	—	o	—	o	5	o	—	o	—	o	—	
6	o	—	o	—	o	—	o	6	7 Cu., St.	o	—	o	—	o	
7	2 St.	o	—	o	—	o	7.7	7	3 Cu.	o	—	o	—	o	
8	2 St.	o	—	o	—	o	o.7	8	o	—	o	—	o	—	
9	o	—	o	—	o	—	o	9	o	—	o	—	o	—	
10	o	—	o	—	o	—	o	10	o	—	o	—	o	—	
11	5 Sc.	o	—	o	—	o	1.7	11	o	—	o	—	o	—	
12	2 Cu.	o	—	o	—	o	7.7	12	2 Cu.	1 Cu.	o	—	o	—	
13	o	—	o	—	o	—	o	13	o	—	o	—	o	—	
14	6 Sc., St.	o	—	o	—	o	2.0	14	o	—	o	—	o	—	
15	o	—	o	3 Gi.	2 Gi.	3 Cs.	2.0	15	o	—	o	—	o	—	
16	o	—	o	—	o	—	o	16	o	—	o	—	o	—	
17	o	—	o	—	o	—	o	17	9 Sc.	o	—	o	—	o	
18	o	—	o	—	o	—	o	18	3 Cu.	o	—	o	—	o	
19	o	—	o	—	o	—	o	19	1 St.	o	—	o	—	o	
20	o	—	o	—	o	—	o	20	o	—	o	—	o	—	
21	o	—	o	—	o	—	o	21	o	—	o	—	o	—	
22	o	—	o	—	o	—	o	22	o	—	o	—	o	—	
23	o	—	o	—	o	—	o	23	3 Sc.	o	—	o	—	o	
24	10 Sc.	o	—	o	—	o	3.3	24	7 Ac.	o	—	o	—	o	
25	o	—	o	—	o	—	o	25	o	—	o	—	o	—	
26	o	—	o	—	o	2 Cu.	o	26	o	—	o	—	o	—	
27	o	—	o	—	o	—	o	27	o	—	o	—	o	—	
28	o	—	o	—	o	—	o	28	o	—	o	—	o	—	
29	o	—	o	—	o	—	o	29	7 Cu.	o	—	o	—	o	
30	o	—	o	—	o	—	o	30	5 Cu.	o	—	o	—	o	
31	o	—	o	—	o	—	o	31	o	—	o	—	o	—	
Mean		9.0	9.0	9.0	9.0	9.0	9.0	Mean	1.9	1.0	0.0	0.0	0.0	0.0	

* Additional observations not used in the daily mean.

CLOUDS (scale 0—10)

1943

September

Date	Hours of Observation					Mean	Date	Hours of Observation					Mean	
	8	11*	14	17*	20			8	11*	14	17*	20		
1	o	—	o	—	o	o·o	1	o	—	4 Ci.	5 Ci., Ac.	5 Ac.	1 Ac.	2·0
2	o	—	o	—	1 Cu.	o·3	2	9 Ac., Cu.	4 Cc.	8 Cb.	10 Cb.	10 Cb.	9·0	
3	2 Cu.	o	—	1 Cu.	o	1·0	3	2 Ac.	1 Ac.	3 Ac.	4 Ac.	7 Cu.	4·0	
4	o	—	o	—	o	o·0	4	o	—	2 Cu.	4 Ac.	4 Ac.	2·0	2·0
5	o	—	o	—	o	o·0	5	1 Ac.	1 Ac.	3 Ac.	7 Ac.	7 Ac.	3·7	3·7
6	o	—	o	—	o	o·0	6	o	—	o	o	o	o·0	o·0
7	o	—	o	—	o	o·0	7	2 Cu.	o	—	o	o	o·7	o·7
8	o	—	o	—	o	o·0	8	o	—	o	o	o	o·0	o·0
9	o	—	o	—	2 Cu.	2 Cu.	9	2 Ci.	o	—	o	o	o·7	o·7
10	1 Cu.	2 Cu.	4 Cu.	1 Cu.	o	1·7	10	6 Ci.	4 Ci.	5 Ci., Cu.	o	o	o	o·7
11	3 Cu.	5 Cu.	4 Cu	o	—	2·3	11	10 Cb., St.	7 Cu.	7 Ch.	6 Ac., Cu.	1 Ac.	6·0	3·7
12	5 Cu.	2 Cu.	o	—	o	1·7	12	1 Cu.	5 Cu.	4 Cu.	3 Cu.	o	1·7	1·7
13	3 Cu.	o	—	o	—	o·0	13	o	—	o	o	o	o·0	o·0
14	3 Cu.	o	—	o	—	o·0	14	1 Ci.	2 Ci.	1 Ci.	9 Ci.	7 Ci.	3·0	3·0
15	o	—	o	—	o	o·0	15	o	—	o	o	2 Ci., Ac.	5 Ci.	1·7
16	o	—	o	—	o	o·0	16	7 Ac.	7 Ac.	5 Ac.	5 Ac.	2 Ac.	4·7	4·7
17	o	—	o	—	o	o·0	17	10 Sc.	8 Sc.	9 Sc.	9 Ac.	2 Ac.	7·0	7·0
18	5 Cu.	o	—	o	—	1·7	18	2 Ac.	6 Ci., Ac.	4 Ac.	3 Ci.	o	2·0	2·0
19	2 Sc.	o	—	o	—	o·7	19	3 Cu.	6 Cu.	2 Cu.	3 Ci., Cu.	1 Ci.	2·0	2·0
20	7 Cu.	o	—	o	—	2·3	20	o	—	5 Ci., Cu.	3 Ci.	o	1·7	1·7
21	2 St.	4 Cu.	2 Cu.	1 Cu.	o	1·3	21	7 Ci.	8 Ci.	8 Ci., Ce.	9 Ac.	6 Ac., As.	7·0	7·0
22	3 Cu.	3 Cu.	1 Cu.	1 Cu.	o	1·3	22	4 Cu.	4 Ac.	2 Cu.	3 Sc.	o	2·0	2·0
23	5 Sc.	o	—	o	—	1·7	23	1 Cu.	2 Cu.	9 Ch.	7 Ch.	o	3·3	3·3
24	o	—	o	—	o	o·0	24	2 Ac.	2 Ac., Cu.	4 Cu.	4 Cu.	o	2·0	2·0
25	1 St.	o	—	o	—	o·3	25	o	—	2 Cu.	5 Cu.	o	2·3	2·3
26	o	—	o	—	o	o·0	26	7 Cu.	5 Cu.	2 Cu.	o	o	1·7	1·7
27	1 St.	o	—	o	—	o·3	27	o	—	2 Ac.	4 Ac., Cu.	o	o·0	o·0
28	2 Cu.	o	—	o	—	o·7	28	o	—	1 Ci.	o	o	o·0	o·0
29	4 Cu.	o	—	o	—	1·3	29	o	—	o	o	o	o·0	o·0
30	2 Cu.	1 Cu.	1 Cu.	3 Cu.	3 Cb.	2·0	30	o	—	1 Cu.	1 Ac.	o	o·3	o·3
Mean	1·7	o·6	o·5	o·3	o·1	o·8	Mean	2·4	2·8	3·4	3·5	1·7	2·5	2·5

November

Date	Hours of Observation					Mean	Date	Hours of Observation					Mean	
	8	11*	14	17*	20			8	11*	14	17*	20		
1	o	—	2 Cu.	3 Cu.	3 Ci., Cu.	2·0	1	3 Ac.	5 Ac., St.	5 Ac., Cu.	2 Ac., Cu.	o	—	2·7
2	7 Ci., Cc.	8 Ci.	8 Ci.	8 Ac.	o	5·0	2	o	—	2 Ac., Cu.	o	—	0·0	0·0
3	4 Cs.	4 Cc., Cu.	9 Cu.	3 Cu.	3 Ac.	5·3	3	4 Ci.	8 Ci.	4 Ci., Cu.	2 Ci.	o	—	2·7
4	2 Ac.	6 Cu.	7 Ac., Cu.	5 Ac., Cu.	o	3·0	4	1 Cu.	6 Cu.	7 As., Cu.	6 Ac., St.	4 Ac.	4·0	4·0
5	o	—	4 Cu.	5 Cu.	2 Cu.	o	5	o	—	3 Cu.	5 Ac., Cu.	4 Sc., Cu.	o	1·7
6	2 Ci.	2 Cu.	2 Cu.	o	—	1·3	6	2 Cu.	1 Ac.	5 Ce., Cu., St.	1 Cc., Ac.	o	—	2·3
7	o	—	3 Ci.	8 Cs.	o	1·0	7	2 Ac.	3 Cu.	5 Cu.	2 Ac.	2 Ac.	2·3	2·3
8	10 Ci.	10 Ci.	9 Ci.	10 Ac., As.	10 Ac., As.	9·7	8	o	—	1 Cu.	5 Cu.	o	—	1·7
9	9 Ac.	10 Ci., Ac.	9 Ci., Ac.	9 Ac., Cu.	8 Ci.	8·7	9	o	—	1 Cu.	5 Cu.	o	—	0·0
10	7 Ci., Cu.	1 Cu.	o	—	o	2·3	10	o	—	4 Ac.	o	—	0·0	0·0
11	9 Ci., Ac., St.	6 Ci.	3 Ac., Cu.	o	—	4·0	11	o	—	1 Ci.	4 Ci.	2 Ci.	1·0	1·0
12	4 Ci.	9 Ci.	8 Cs.	9 Ci.	9 Cs.	7·0	12	8 Ci., Cc.	8 Ci.	8 Ci., Cs.	7 Ci., Cs.	8 Ci., Cs.	8·0	8·0
13	8 Ci.	4 Ci.	6 Cs.	6 Cs.	1 Ci.	5·0	13	8 Ci., Cs.	8 Ci.	9 Ci., Ce.	10 Ci., Cs., Ac.	10 Ci., Cs.	9·0	9·0
14	3 Ac.	6 Ac., Cu.	8 Ac.	4 Cu.	o	3·7	14	10 Ci., Cs., Ac.	10 Ac., Sc.	10 Ac., Sc.	10 Ac., Sc.	7 Ci., Ac.	9·0	9·0
15	o	—	1 Cu.	2 Cu.	3 Ac.	o	15	o	—	3 Cu.	6 Ci., Ac., Cu.	2 Sc.	o	2·0
16	o	—	2 Cu.	o	—	o·0	16	8 Ci.	2 Ac., Cu.	10 Sc., Cu., Cb.	6 Cb.	o	—	6·0
17	o	—	1 Cu.	6 Cu.	2 Ac.	o	17	9 Sc.	10 Sc., Cb.	10 Cb.	10 Sc., Cb.	3 Sc.	7·3	7·3
18	o	—	6 Cu.	7 Cu.	1 Cu.	o	18	10 Sc., Cb.	10 Sc., Cb.	7 Sc., Cb.	8 Sc.	9·3	9·3	9·3
19	o	—	3 Ci.	7 Cs.	5 Ci.	o	19	10 Ac., As.	10 Sc., Cb.	10 Sc., Cb.	10 Ac., Sc.	7 Ci.	9·0	9·0
20	o	—	o	—	o	o·0	20	10 Ci., Ac.	10 Ac.	10 Ci., Ac.	10 Sc., Cb.	6 Cs.	8·7	8·7
21	2 Cu., St.	4 Cu.	o	—	o	o·7	21	8 Cs., Ac.	8 Ac., Sc.	10 Sc., Cb.	10 Sc., Cb.	8 Sc., Cb.	8·7	8·7
22	o	—	o	—	1 Ci.	o	22	10 Ns.	10 Ns.	9 Ac., St.	10 Sc., Cb.	10 Sc.	o	6·3
23	2 Ci., Cu.	o	—	o	—	1 Ci.	23	10 Ns.	7 Ac., Sc.	7 Ac., Sc.	10 Ac., Sc.	5·7	5·7	5·7
24	6 Ci.	6 Ci.	9 Ci.	8 Ci.	8 Ci.	o·7	24	3 Ac.	3 Cu.	7 Cu.	3 Cc.	o	—	3·3
25	7 Ci.	4 Ci.	8 Ci., Ac.	6 Ci.	o	5·0	25	1 Cu.	1 Cu.	1 Cu.	1 Cu.	o	—	0·7
26	4 Ci.	6 Ci.	8 Ci.	10 Ci., As.	9 Ci., Ac.	7·0	26	2 Ci., Cu.	7 Ci., Cu.	4 Ac., Cu.	4 Ac., Cu.	o	—	2·0
27	9 Ci., St.	9 Cs., Cu.	9 Cs., Ac., Cu.	9 Ac., Cu.	9 Ci.	9·0	27	8 Ac.	1 Ac.	1 Ci., Cu.	1 Ac.	3 Ac.	4·0	4·0
28	8 Ci.	8 Ci.	9 Ci., Ac.	10 Ac.	10 Ac.	9·0	28	o	—	1 Ci.	7 Ac.	2 Ci.	o	—
29	10 Ce., Ac.	10 Ce., Ac.	9 As.	10 As., Sc.	10 Ac., Sc.	9·7	29	8 Ac.	9 As.	10 As.	10 Ac.	9·0	6·7	6·7
30	o	—	o	—	o	o·0	30	10 Ac., As.	10 Ac.	10 Ac.	10 Ac.	1 Ci.	o	—
Mean	3·8	4·4	5·1	4·4	2·7	3·9	Mean	4·7	5·2	5·7	5·1	2·5	4·3	4·3

* Additional observations not used in the daily mean.

ACTINOMETRIC OBSERVATIONS

Daily at 14h.—1, Bright Bulb; 2 Black Bulb; 3, Difference

1943

Days of Month	January			February			March			April			May			June		
	1	2	8	1	2	3	1	2	3	1	2	3	1	2	3	1	2	8
1	33.2	55.5	22.3	29.6	53.6	24.0	32.1	56.9	24.8	39.9	62.4	22.5	43.2	65.0	21.8	40.9	62.3	21.4
2	29.3	53.8	24.5	29.1	52.4	23.3	32.1	56.8	24.7	36.3	58.2	21.9	42.9	65.0	22.1	41.7	62.9	21.2
3	24.2	38.1	13.9	29.4	49.1	19.7	31.1	54.7	23.6	40.1	63.2	23.1	43.1	65.0	21.9	43.7	64.5	20.8
4	27.3	47.9	20.6	33.3	56.0	22.7	31.6	54.6	23.0	41.5	62.9	21.4	46.2	67.9	21.7	46.4	66.9	20.5
5	29.0	51.3	22.3	32.9	55.7	22.8	30.1	52.6	22.5	41.3	62.5	21.2	47.7	69.2	21.5	49.0	66.7	17.7
6	31.6	56.5	24.9	31.9	54.4	22.5	30.6	52.5	21.9	41.3	62.4	21.1	48.7	70.7	22.0	50.0	65.9*	15.9
7	31.6	56.8	25.2	30.2	52.5	22.3	31.1	54.4	21.3	41.3	62.4	21.1	50.1	71.8	21.7	44.8	59.8	15.0
8	30.2	56.0	25.8	30.0	52.5	22.5	34.1	56.9	22.8	41.0	62.2	21.2	50.0	71.7	21.7	42.6	58.0	15.4
9	17.5	32.3	14.8	27.3	49.2	21.9	33.0	56.8	23.8	40.8	62.0	21.2	46.7	68.8	22.1	42.1	59.1	17.0
10	28.4	50.1	21.7	32.5	54.9	22.4	35.5	58.6	23.1	42.0	64.9	22.9	40.3	61.9	21.6	44.0	61.2	17.2
11	30.9	53.4	22.5	33.7	55.3	21.6	35.6	58.5	22.9	33.1	56.0	22.9	41.2	63.4	22.2	43.9	60.6	16.7
12	32.9	57.3	24.4	33.5	55.0	21.5	35.3	58.2	22.9	28.5	49.7	21.2	40.9	62.9	22.0	44.6	62.2	17.6
13	30.6	52.9	22.3	30.1	52.4	22.3	35.7	58.5	22.8	29.2	51.3	22.1	40.5	62.5	22.0	45.2	62.5	17.3
14	31.7	54.0	22.3	31.2	54.3	23.1	26.5	40.0	13.5	34.4	57.5	23.1	40.1	61.9	21.8	46.8	63.5	16.7
15	28.2	45.2	17.0	33.2	56.8	23.6	29.2	51.7	22.5	37.3	60.5	23.2	41.8	64.3	22.5	43.3	60.3	17.0
16	31.1	55.0	23.9	36.1	61.6	25.5	35.5	59.0	14.5	30.6	51.3	20.7	37.7	58.5	20.8	43.7	60.6	16.9
17	27.0	45.6	18.6	34.2	56.9	22.7	34.5	56.9	22.4	31.0	54.5	23.5	42.6	64.5	21.9	44.2	60.8	16.6
18	25.0	44.0	19.0	35.6	58.1	22.5	34.4	56.6	22.2	31.3	54.4	23.1	42.5	64.5	22.0	44.3	61.5	17.2
19	28.4	51.9	23.5	34.1	57.0	22.9	32.8	54.1	21.3	32.1	53.3	21.2	40.2	61.5	21.3	44.3	60.0	15.7
20	20.0	33.6	13.6	30.3	54.2	23.9	33.0	55.1	22.1	36.6	58.1	21.5	40.1	61.5	21.4	43.7	60.5	16.8
21	14.9	27.0	12.1	30.6	54.9	24.3	33.7	56.0	22.3	38.5	60.6	22.1	42.1	63.0	20.9	43.3	59.5	16.2
22	27.8	49.4	21.6	30.8	54.8	24.2	29.0	50.1	21.1	39.9	61.9	22.0	42.1	62.9	20.8	41.6	58.6	17.0
23	20.0	33.6	13.6	23.2	46.3	23.1	35.1	58.6	23.5	39.4	61.0	21.6	42.7	63.7	21.0	43.1	60.8	17.7
24	23.0	40.5	17.5	28.7	53.0	24.3	33.4	57.8	24.4	40.9	63.7	22.8	39.4	60.6	21.2	44.5	62.0	17.5
25	31.1	53.8	22.7	28.2	51.0	22.8	33.2	57.6	24.4	40.6	63.2	22.6	41.1	63.1	22.0	46.6	63.2	16.6
26	30.8	53.4	22.6	29.1	53.4	24.3	33.0	57.1	24.1	38.6	61.0	22.4	42.9	64.9	22.0	46.5	64.0	17.5
27	30.1	52.4	22.3	29.5	55.1	25.6	32.8	57.5	24.7	39.1	61.6	22.5	46.5	67.9	21.4	46.3	63.8	17.5
28	21.1	38.4	17.0	32.4	27.1	24.7	33.1	57.2	24.1	40.5	62.9	22.4	47.6	69.4	21.8	45.5	62.2	16.7
29	28.0	51.4	23.4	—	—	—	36.6	59.4	22.8	41.9	63.6	21.7	38.1	61.0	22.9	45.0	62.5	17.5
30	27.5	50.0	22.5	—	—	—	38.5	61.0	22.5	43.3	65.1	21.8	39.1	61.7	22.6	47.6	64.8	17.2
31	18.0	36.4	18.4	—	—	—	39.9	62.4	22.5	—	—	—	39.4	61.8	22.4	—	—	—
Mean	27.12	47.66	20.54	30.59	53.34	22.75	33.29	55.78	22.48	37.74	59.81	22.07	42.82	64.60	21.77	44.64	62.04	17.40

Days of Month	July			August			September			October			November			December		
	1	2	8	1	2	8	1	2	8	1	2	8	1	2	8	1	2	8
1	45.6	62.9	17.3	45.2	62.7	17.5	46.4	64.2	17.8	47.9	67.4	19.5	40.5	59.9	18.5	36.8	53.5	16.7
2	46.5	63.5	17.0	43.4	61.3	17.9	45.6	63.1	17.5	Rain	Rain	Rain	40.2	59.4	19.2	36.8	55.1	18.3
3	47.3	63.7	16.4	44.6	62.5	17.9	43.9	63.0	19.1	52.8	71.4	18.6	Rain	Rain	Rain	35.9	55.0	19.1
4	48.1	64.6	16.5	44.2	62.1	17.9	44.0	62.8	18.8	48.3	64.6	16.3	39.3	54.9	15.6	35.8	59.2	23.4
5	46.9	63.0	16.1	43.5	61.5	18.0	41.5	59.9	18.4	46.6	65.5	18.9	39.1	54.6	15.5	33.7	52.4	18.7
6	46.7	63.5	16.8	45.5	62.5	17.0	43.0	62.1	19.1	42.5	59.5	17.0	37.3	56.3	19.0	34.0	46.6	12.6
7	46.1	62.3	16.2	45.6	62.2	16.6	45.7	64.5	18.5	42.8	60.9	18.1	38.8	57.6	18.8	31.4	49.4	18.0
8	47.9	64.9	17.0	47.5	65.1	17.6	47.5	66.1	18.6	44.2	62.2	18.0	42.2	53.3	11.1	33.8	48.7	14.9
9	49.9	66.5	16.6	51.6	68.2	16.6	44.3	62.4	18.1	44.1	60.9	16.8	42.1	52.7	10.6	33.9	53.2	19.3
10	49.6	65.1	15.5	48.2	64.7	16.5	43.0	61.5	18.5	42.6	60.0	17.4	41.9	57.4	15.5	36.0	54.4	18.4
11	43.5	60.9	17.4	45.6	62.5	16.9	41.6	61.0	19.4	42.5	61.2	18.7	41.7	55.4	13.7	36.7	54.3	17.6
12	43.4	60.3	16.9	44.9	62.5	17.6	42.7	62.0	19.3	41.1	59.9	18.8	39.8	54.6	14.8	36.9	55.5	18.6
13	44.2	61.0	16.8	46.5	63.3	16.8	41.7	60.6	18.9	44.5	62.7	18.2	42.5	61.8	19.3	37.2	57.3	20.1
14	44.0	60.8	16.8	50.6	68.2	17.6	44.6	63.8	19.2	48.9	66.0	17.1	41.7	61.4	19.7	26.4	32.7	6.3
15	45.5	63.0	17.5	51.2	67.4	16.2	45.5	64.6	19.1	46.5	63.0	16.5	41.6	55.9	14.3	33.6	51.2	17.6
16	47.6	64.5	16.9	46.0	63.9	17.9	45.4	65.0	19.6	47.5	65.5	18.0	36.6	53.7	17.1	32.6	51.2	18.6
17	47.3	64.1	16.8	47.3	65.0	17.7	45.9	65.0	19.1	38.9	47.7	8.8	37.2	55.0	17.8	Rain	Rain	Rain
18	47.4	65.0	17.6	48.0	65.9	17.9	45.9	61.0	15.1	43.0	60.9	17.9	37.2	55.8	18.6	Rain	Rain	Rain
19	48.6	65.6	17.0	47.8	65.5	17.7	43.9	62.7	18.8	43.0	56.6	13.6	30.5	54.4	17.9	26.2	37.1	10.9
20	47.2	65.2	18.0	46.0	63.9	17.9	42.0	60.5	18.5	42.7	56.0	13.3	30.9	58.8	18.9	26.0	33.9	7.9
21	47.9	65.4	17.5	45.6	60.2	14.6	42.3	62.5	20.2	42.8	59.0	16.2	38.1	56.2	18.1	Fain	Rain	Rain
22	46.4	63.4	17.0	46.5	64.5	18.0	42.1	60.0	17.9	41.8	59.5	17.7	38.0	55.5	17.5	29.4	37.9	8.5
23	48.0	65.1	1															

DURATION OF SUNSHINE

1943

Days of Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
	H. M.	H. M.	H. M.	H. M.	H. M.							
1	9 32	8 50	7 00	11 34	11 10	13 00	13 15	12 20	11 38	10 00	10 05	9 35
2	4 42	7 10	6 40	6 37	12 18	13 25	12 12	12 29	11 40	5 38	8 35	9 47
3	0 00	4 35	8 45	8 28	12 00	13 17	13 10	11 40	11 45	9 30	7 49	9 02
4	1 11	8 30	9 10	2 43	12 30	13 35	13 00	12 26	11 35	9 42	9 48	8 40
5	8 58	10 00	7 10	4 27	11 50	12 50	12 55	12 30	11 35	8 39	10 00	9 47
6	8 40	10 18	8 45	8 28	12 35	13 05	13 05	12 23	11 39	10 32	10 22	9 44
7	9 54	10 10	9 25	11 54	12 30	12 55	12 30	11 48	11 36	10 28	8 15	9 45
8	8 00	8 35	10 10	11 58	12 25	12 00	12 00	11 39	11 20	10 30	7 10	9 51
9	0 25	9 48	6 55	11 57	12 00	13 05	12 30	12 39	11 31	10 15	4 05	9 52
10	9 55	10 17	9 43	10 34	11 53	13 15	12 50	12 20	11 23	9 22	9 20	9 36
11	9 10	5 45	8 42	10 57	11 50	13 30	11 50	12 09	10 58	5 30	8 20	9 49
12	7 55	2 30	5 10	8 03	12 30	13 30	13 00	11 42	10 42	10 15	8 08	7 31
13	10 00	8 50	10 30	9 36	12 35	13 23	12 45	12 07	11 04	10 05	9 24	6 52
14	8 10	9 32	9 05	11 52	11 36	12 40	12 12	12 34	10 50	9 43	8 14	0 37
15	7 48	9 54	9 15	11 11	9 25	12 35	12 10	12 22	10 58	9 45	9 36	8 02
16	9 40	8 57	10 55	11 56	9 07	12 18	13 15	12 17	11 08	6 20	9 50	4 08
17	8 05	10 30	11 00	6 38	8 27	12 18	13 10	10 17	11 02	2 25	9 20	1 26
18	7 50	10 53	10 32	8 47	1 50	13 28	13 05	11 56	10 44	5 30	9 46	0 11
19	9 35	9 45	4 19	12 33	7 35	13 20	12 55	10 42	10 32	10 20	9 47	2 52
20	7 00	9 40	5 30	12 36	13 00	13 00	13 00	11 53	9 37	10 25	10 02	5 35
21	3 00	9 25	0 40	12 23	13 08	13 05	12 50	11 52	9 35	8 10	9 25	2 45
22	5 10	5 00	4 45	12 02	4 15	12 38	12 35	11 25	10 11	10 00	9 50	1 27
23	2 10	4 10	10 50	12 17	13 02	12 55	12 47	12 15	9 45	8 10	9 40	2 52
24	2 45	8 27	9 50	11 53	13 05	13 12	10 38	10 39	10 44	10 35	8 35	9 05
25	10 20	10 05	4 10	12 14	12 52	12 40	12 50	11 16	10 50	9 45	7 09	9 33
26	10 20	9 25	9 51	12 32	13 17	13 00	12 42	12 02	10 36	10 45	7 15	9 33
27	10 10	10 04	11 28	12 14	13 24	13 15	12 54	11 51	10 33	10 20	7 27	8 33
28	3 30	4 40	11 43	12 20	12 29	13 15	12 36	12 00	10 20	10 15	7 15	9 55
29	9 15	—	11 35	12 23	13 06	11 46	12 35	11 30	10 28	10 25	5 10	4 39
30	8 12	—	11 04	12 35	13 00	13 05	12 34	11 20	10 14	10 15	9 50	3 55
31	2 45	—	10 05	—	13 00	—	12 02	11 58	—	9 30	—	10 04
Mean	6 54	8 25	8 32	10 32	11 25	12 59	12 38	11 53	10 53	9 08	8 39	6 56
Mean Percentage	66.2	75.9	71.4	81.9	83.7	92.4	91.0	89.7	87.9	79.5	80.9	67.6

RAINFALL
(Millimetres)

1943

			14 h.	20 h.	8 h.	Total	Total for Month
January	.	.	21	Drops	Drops	—	—
	"	.	30	—	—	Drops	—
	"	.	31	0.2	Drops	—	0.2
February	.	.	22	Drops	Drops	16.2	16.2
	"	.	23	7.2	—	0.1	7.3
March	.	.	2	—	Drops	—	—
	"	.	14	—	—	—	0.4
	"	.	19	Drops	Drops	—	—
	"	.	20	—	Drops	3.5	3.5
	"	.	21	—	—	1.4	1.4
	"	.	22	0.4	Drops	—	0.4
	"	.	25	Drops	—	—	5.7
April	.	.	5	—	0.4	—	—
	"	.	11	—	—	0.1	0.5
May	.	.	18	—	—	0.2	0.2
October	.	.	2	0.1	Drops	0.4	0.5
	"	.	21	—	Drops	2.4	2.4
	"	.	23	—	1.6	—	4.5
November	.	.	3	Drops	—	—	0.0
December	.	.	16	Drops	1.5	—	1.5
	"	.	17	0.2	Drops	—	0.2
	"	.	18	Drops	—	—	—
	"	.	21	Drops	—	—	—
	"	.	22	2.9	1.1	3.3	7.3
	"	.	23	0.8	—	—	0.8
	"	.	29	—	—	Drops	—
TOTAL . .			11.8	5.0	27.6	—	44.4

EVAPORATION
(Millimetres)

DAY'S TOTAL from 8 h. to 8 h.—Piche Evaporimeter in Screen

1943

Days of Month	January	February	March	April	May	June	July	August	September	October	November	December
1	4.6	3.8	5.3	10.2	13.8	13.2	15.9	13.0	15.5	20.6	6.7	6.2
2	7.4	3.9	5.5	10.0	11.7	13.5	15.9	11.0	12.5	22.0	8.2	5.5
3	12.5	3.8	4.6	12.5	12.1	16.0	18.2	10.8	10.4	18.7	6.2	5.3
4	5.5	4.7	4.6	11.0	15.2	19.6	18.7	11.2	11.0	14.0	5.0	6.8
5	6.1	5.0	6.0	5.0	17.6	22.7	16.0	11.4	9.7	10.6	6.2	6.8
6	3.8	6.0	6.4	6.4	18.0	20.5	14.1	10.5	9.0	11.1	7.6	6.1
7	5.0	4.9	6.2	7.2	21.2	12.5	14.5	13.6	13.8	9.5	8.5	5.0
8	3.8	4.8	5.9	10.3	21.9	11.5	15.4	15.5	12.2	10.8	12.2	6.3
9	3.6	6.0	6.8	14.8	14.0	11.0	17.0	20.9	11.2	11.3	7.0	5.4
10	5.0	7.7	8.0	15.0	11.4	11.8	17.2	15.7	9.2	10.9	7.6	9.4
11	5.9	10.3	10.4	10.9	12.0	13.5	14.8	12.8	9.7	7.9	7.6	9.2
12	3.5	7.2	12.1	9.6	10.9	14.5	13.5	11.0	9.0	7.8	10.5	6.7
13	5.3	7.5	8.4	7.3	8.0	14.9	13.4	13.6	9.4	9.8	9.9	6.7
14	7.5	5.6	5.3	7.6	9.4	17.0	13.0	19.5	10.2	11.1	7.2	4.4
15	4.8	5.8	5.4	7.8	11.3	13.8	12.5	16.3	14.9	13.5	8.3	4.4
16	5.4	5.6	5.9	6.7	10.2	13.0	16.9	12.7	12.8	14.3	9.0	1.5
17	5.9	6.1	7.2	6.1	11.9	15.1	17.5	11.0	11.2	10.6	7.0	1.3
18	5.7	7.0	8.0	6.9	8.8	16.2	18.4	11.7	9.9	9.7	8.2	1.7
19	5.9	6.0	9.7	7.6	11.4	14.3	16.2	12.0	9.9	8.7	7.8	5.6
20	5.0	6.0	5.5	11.2	11.2	12.5	14.8	10.8	8.5	7.5	8.7	7.3
21	2.0	5.0	5.4	11.1	13.7	13.5	14.0	10.8	8.3	9.5	7.3	7.0
22	3.5	5.4	4.2	9.0	13.5	10.8	13.4	12.7	8.6	8.0	6.8	1.2
23	5.6	1.6	6.0	9.4	14.1	10.7	18.0	11.4	10.2	3.3	9.9	0.6
24	5.3	4.5	7.7	10.5	13.1	13.3	15.9	12.3	8.1	6.3	8.9	4.2
25	5.4	3.7	7.6	10.4	11.1	13.9	16.6	9.4	12.8	7.4	5.6	4.7
26	4.0	4.0	9.4	9.2	14.2	14.0	15.1	15.4	10.6	6.5	5.5	5.4
27	5.6	5.0	7.0	10.5	17.3	14.8	13.9	16.7	10.7	6.8	6.5	4.5
28	5.2	5.2	8.7	10.5	14.6	14.4	13.7	15.6	10.8	10.0	6.2	3.8
29	5.5	—	11.2	13.3	11.0	13.0	15.6	11.0	10.5	9.7	6.3	4.1
30	5.7	—	13.0	13.4	10.9	15.5	15.7	12.8	15.3	9.5	7.0	4.1
31	3.0	—	12.0	—	11.5	—	16.2	14.7	—	8.1	—	7.1
Mean	5.26	5.43	7.40	9.71	13.13	14.37	15.55	13.15	10.86	10.50	7.65	5.11

MISCELLANEOUS PHENOMENA

1943

January	3	○○ a.m. Khamsin Conditions.	May	7	○○ a. & p.m. ○○ a. & p.m.
	5	○○ a.m.		9	○○ a. & p.m.
	12	□ at 20 ^h .		11	⌚ 17 ^h —19 ^h
	17	⊕ at 9 ^h .		14	□ at 19 ^h 50 ^m .
	20	O a. & p.m.		16	○○ a.m.
	31	↖ at 15 ^h . ○○ p.m.		17	⊕ at 14 ^h .
				28	O p.m. ⌚ 17 ^h 30 ^m —22 ^h .
February	8	○○ a. & p.m. Khamsin Conditions.	June	3	⌚ 10 ^h —19 ^h .
	12	○○ a. & p.m.		4	⌚ all day.
	14	○○ a. & p.m.		5	○○ a. & p.m.
	16	○○ a.m.			Khamsin day.
	17	O p.m.			⌚ & ↖ all day.
	18	O a.m.		6	⌚ & ↖ 0 ^h —3 ^h & 8 ^h —16 ^h .
	22	↖ at 12 ^h & 21 ^h 30 ^m .		15	○○ p.m.
	23	↖ from 4 ^h —14 ^h .		18	○○ a. & p.m.
March	2	○○ p.m.	July	3	⌚ 12 ^h —20 ^h .
	5	⌚ & ↖ 15 ^h 10 ^m —22 ^h		4	⌚ 13 ^h —19 ^h .
	7	⊕ at 11 ^h 45 ^m		5	○○ a.m.
		⌚ 20 ^h —24 ^h .		8	○○ a.m.
	8	⌚ 20 ^h —23 ^h 30 ^m .		11	○○ a. & p.m.
	11	○○ a. & p.m.		15	○○ a.m.
	14	▲ at 17 ^h .			□ at 20 ^h .
		○ at 17 ^h 15 ^m SE.		18	○○ a. & p.m.
		O p.m.		19	○○ a.m.
		↖ at 18 ^h 30 ^m E.		23	○○ a.m.
	15	O a. & p.m.		24	○○ a. & p.m.
	17	O a. & p.m.		26	○○ a. & p.m.
	19	⌚ & ↖ 16 ^h —22 ^h 15 ^m .		28	○○ a. & p.m.
		Khamsin Conditions.		29	○○ a. & p.m.
	20	○○ a.m.		30	○○ a. & p.m.
		Khamsin Conditions.		31	○○ a. & p.m.
	21	○○ a. & p.m.			
		⌚ 8 ^h 45 ^m —20 ^h .			
		↖ at 17 ^h			
	24	O a. & p.m.		1	○○ a. & p.m.
	25	⌚ 12 ^h —19 ^h .		2	○○ a. & p.m.
	26	⌚ 9 ^h —18 ^h 30 ^m .		4	○○ a.m.
		↖ at 15 ^h 15 ^m ,		5	○○ a.m.
	28	⌚ 20 ^h —24 ^h .		6	○○ a.m.
	29	⌚ 0 ^h —1 ^h 30 ^m & 22 ^h —24 ^h .		7	○○ a. & p.m.
				8	○○ a.m.
				9	○○ a.m.
				10	○○ a. & p.m.
April	2	⌚ 13 ^h 40 ^m —21 ^h .		11	○○ a. & p.m.
		⊕ 12 ^h 40 ^m —13 ^h 40 ^m .		13	○○ a.m.
	4	⌚ 10 ^h 30 ^m —22 ^h .		14	○○ a. & p.m.
		↖ at 14 ^h .		18	○○ a. & p.m.
		O p.m.		20	○○ a.m.
		Khamsin Conditions.		21	○○ a. & p.m.
	5	O a.m.		24	○○ a. & p.m.
	7	O a. & p.m.		27	○○ a. & p.m.
	10	○○ a. & p.m.		28	○○ a. & p.m.
		⌚ 9 ^h 30 ^m —18 ^h .		29	○○ a.m.
		Khamsin Conditions.		30	○○ a.m.
	11	O a. & p.m.			
	12	O a.m.			
	16	↖ 18 ^h 30 ^m —20 ^h ESE.			
	21	⌚ 18 ^h 45 ^m —20 ^h .			
May	3	⌚ 22 ^h —24 ^h .	September	1	○○ a. & p.m.
	4	⌚ 0 ^h —1 ^h & 10 ^h —23 ^h .		3	O a.m.
	5	⌚ 19 ^h —23 ^h 30 ^m .		5	○○ a. & p.m.
				7	○○ a. & p.m.
				8	○○ p.m.
				19	○○ a. & p.m.
				20	○○ a. & p.m.

MISCELLANEOUS PHENOMENA (Continued)

1943

September	21	○○ a.m.	November	10	○○ a.m.
	26	○○ a. & p.m.		12	⊕ 13 ^h —13 ^h 40m.
	27	○○ a. & p.m.		13	⊖ at 20 ^h 10m.
	28	○○ p.m.		15	⊕ 13 ^h —13 ^h 50m.
	29	○○ a. & p.m.		17	○○ a.m.
	30	↖ at 16 ^h E.		19	⚡ 19 ^h —24 ^h .
		↖ at 20 ^h E.		21	○○ a.m.
October	1	○○ a. & p.m. ⚡ at 17 ^h	December	24	○○ a.m.
	2	↖ at 18 ^h 35m & 20 ^h E.		26	○○ a.m.
	5	○○ a. & p.m.		27	⊕ 10 ^h —11 ^h 30m.
	9	≡≡ at 9 ^h 30m.		4	○○ a.m.
	12	○○ a.m.		6	○○ a.m.
	13	○○ a. & p.m.		7	○○ a.m.
	18	○ a. & p.m.		8	○○ a.m.
	19	○ a.m.		10	○○ a.m.
	20	○○ a.m.		11	○○ a.m.
	21	○ a. & p.m. ↖ at 18 ^h 10m W.		13	○○ a.m.
	23	↖ at 13 ^h 40m.		14	○○ a. & p.m.
	24	○ a.m. ↖ at 18 ^h 30m. NNW.		15	≡≡ a.m.
	25	○ p.m.		16	○○ a. & p.m.
	26	○ a. & p.m.		17	○○ a. & p.m.
	30	○ a. & p.m.		19	○○ a. & p.m.
				20	○ p.m.
				21	⚡ (intermittent) 10 ^h 30m—24 ^h .
				22	⚡ 3 ^h —7 ^h .
November	2	○○ a. & p.m.		23	↖ at 5 ^h 54m.
	7	○ a. & p.m.		27	○○ a. & p.m.
	8	⊖ at 18 ^h 30m. ⊕ 8 ^h 30m—13 ^h 20m.		28	○○ a. & p.m.
	9	⊖ 18 ^h —19 ^h 30m. ○○ a. & p.m.		29	⊕ at 14 ^h 30m.
				30	○○ a.m.
				31	○○ a.m.

CLIMATOLOGICAL FACTORS

TEMPERATURE (°C.)

1943

Months	Mean Temperature for 24 h.	Mean at			Non-periodic Diurnal Range			Hottest Day, Mean Temperature	Coldest Day, Mean Temperature	Range	Absolute Monthly Range					Mean Diurnal Variability
		8 h.	14 h.	20 h.	Mean Max.	Mean Min.	Range				Absolute Max.	Date	Absolute Min.	Date	Range	
December 1942	15.5	12.7	19.9	15.8	20.5	10.8	9.7	18.9	13.2	5.7	24.1	1	7.5	19	16.6	0.9
January . 1943	12.9	9.6	17.2	13.6	18.2	7.9	10.3	20.0	8.6	11.4	24.3	3&4	3.3	30	21.0	1.2
February . .	13.6	10.5	18.0	14.3	18.9	8.2	10.7	18.0	7.8	10.2	24.2	11	3.4	23	20.8	1.3
March	15.4	13.1	20.1	15.9	21.0	9.9	11.1	22.6	9.3	13.3	28.8	12	5.0	7	23.8	1.7
April	18.0	15.5	23.5	18.8	24.6	11.6	13.0	23.0	12.4	10.6	31.6	4	6.2	6	25.4	1.5
May	24.0	21.9	29.7	24.9	30.8	16.6	14.2	32.8	19.8	13.0	39.9	8	12.8	13	27.1	1.6
June	25.5	22.6	31.7	27.1	32.8	18.2	14.6	29.4	22.0	7.4	38.7	5	15.3	2	23.4	1.0
July	28.2	24.5	34.4	30.5	35.6	20.8	14.8	31.0	24.7	6.3	39.7	31	18.2	13	21.5	0.9
August	28.3	25.0	34.0	30.0	35.1	21.7	13.4	32.0	26.5	5.5	40.0	9	20.0	25	20.0	1.0
September . .	26.6	24.1	31.8	27.8	32.7	20.2	12.5	29.6	24.6	5.0	37.4	8	18.1	12	19.3	0.9
October	26.1	24.0	31.3	26.0	32.2	20.6	11.6	36.0	21.0	15.0	42.6	3	15.5	26	27.1	1.4
November . . .	22.1	19.5	27.1	22.0	27.8	17.0	10.8	25.8	20.3	5.5	33.6	8	14.3	21	19.3	1.0
December . . .	17.0	14.7	21.0	17.0	21.7	12.5	9.2	21.2	13.4	7.8	27.2	13	9.5	17	17.7	0.9
Civil Year . . .	21.5	18.8	26.6	22.3	27.6	15.4	12.2	36.0	7.8	28.2	42.6	Oct.	3.3	Jan.	39.3	1.2
Meteorological Year	21.4	18.6	26.6	22.2	27.5	15.3	12.2	Oct. 3rd	Feb. 23rd	—	—	3rd	—	30th.	—	1.2

Notes.— Mean diurnal variability = $\frac{(t_1-t_2)+(t_2-t_3)+\dots+(t_n-t_{n+1})}{n}$ without regard to the sign of (t_1-t_2) , etc.

Where t_1 is temperature on the 1st day.

t_2 " " " 2nd "

t_3 " " " 3rd "

t_n " " " last "

t_{n+1} " " " 1st " of following month.

HUMIDITY, RAIN, CLOUD, SUNSHINE, EVAPORATION,**WIND, PRESSURE****1948**

Months	Vapour Press- ure m.b.	Relative Humidity				Rain		Cloudi- ness 0-10	Duration of Sunshine		Mean Evapo- ration mm.	Mean Wind Velocity kilomet- res per hour	Stand- ard Pres- sure Mean m.b. 900 +
		8 h.	14 h.	20 h.	Mean*	Amount mm.	Num. of Rainy Days		Total hours	Percen- tage of possible			
December 1942	11.1	80	42	61	66	3.5	2	3.6	235.0	73.9	148	12.5	105.0
January 1943	8.3	73	38	54	58	0.2	1	3.9	214.1	66.2	163	12.4	104.3
February	8.8	75	37	55	60	23.5	2	3.6	235.8	75.9	152	12.6	105.4
March	8.9	66	31	51	55	5.7	4	3.5	264.7	71.4	229	16.7	101.5
April	9.5	61	25	44	51	0.5	2	1.8	316.2	81.9	291	16.5	102.5
May	11.6	52	23	36	44	0.2	1	2.5	353.7	83.7	407	17.2	100.5
June	14.1	60	23	36	48	—	0	0.4	389.3	92.4	431	19.9	99.1
July	16.0	66	21	33	46	—	0	0.4	391.9	91.0	482	16.5	95.4
August	18.6	70	27	42	53	—	0	0.6	368.4	89.7	408	14.8	94.9
September	18.4	69	32	48	57	—	0	0.8	326.6	87.9	326	15.2	97.7
October	16.6	63	31	51	53	4.5	3	2.5	283.1	79.5	326	16.7	100.4
November	15.0	72	36	58	60	Drops	0	3.9	259.5	80.9	229	16.3	103.6
December	12.5	77	47	65	67	9.8	4	4.3	215.0	67.6	158	14.6	105.6
Civil Year	13.2	67	31	48	54	44.4	17	2.4	3618.3	80.7	3602	15.8	100.9
Meteorological Year . . .	13.1	67	30	47	54	38.1	15	2.3	3638.3	81.2	3592	15.6	100.9

*These are true means

Notes.—Minimum vapour pressure

Maximum " "

Minimum relative humidity.

Maximum rainfall in one day.

Maximum evaporation in one day.

Minimum standard pressure.

Maximum " "

1.9 m.b. April 9th at 23h. and 24h.

26.7 m.b. August 17th at 24h.

5% April 10th at 12h

16.2 mm. fell on February 22nd.

22.7 mm. June 5th.

985.4 m.b.s. March 19th. at 2lh

1015.9 m.b. February 2nd. at 10h.

PILOT BALLOON OBSERVATIONS

PILOT BALLOON

Wind Direction East of North (Unit, 10 degrees)

DATE	G.M.T. of Starting	HEIGHT ABOVE GROUND											
		112		500		1000		1500		2000		2500	
		D	V	D	V	D	V	D	V	D	V	D	V
1943	H. M												
JANUARY													
2	6 53	09	8	09	20	05	5	03	37	32	56	30	73
3	6 39	14	18	20	36	24	45	26	84	—	—	—	—
* 4	6 40	17	18	—	—	26	52	26	—	—	—	—	—
5	6 45	14	15	26	42	—	—	54	—	—	—	—	—
6	6 33	11	4	31	16	30	17	30	13	04	10	28	17
9	6 41	—	0	27	15	30	18	30	15	31	24	29	40
10	6 51	16	15	19	28	25	32	25	32	27	39	30	45
11	6 49	12	15	24	30	26	46	24	62	—	—	—	—
12	6 46	16	12	24	13	29	29	39	39	28	37	32	8
13	6 31	—	0	13	3	31	8	33	11	29	16	32	29
14	6 49	16	8	20	57	22	58	23	63	25	62	26	54
16	6 49	13	6	17	19	24	23	23	36	26	42	28	39
17	6 55	16	10	20	16	25	31	27	40	27	58	26	40
18	7 06	14	13	21	24	29	28	30	38	31	38	—	—
19	6 46	10	8	23	18	27	20	28	32	32	22	25	18
20	6 53	16	15	27	30	28	43	27	48	25	62	26	58
21	6 39	17	8	27	25	27	30	27	25	—	—	—	—
24	6 44	28	8	0	35	01	42	03	29	03	36	—	—
25	6 41	—	0	04	29	05	32	06	19	05	6	—	0
26	6 56	—	0	06	16	09	6	20	15	22	26	22	33
27	6 37	15	4	25	20	24	36	24	46	28	55	28	69
28	6 45	17	6	26	32	28	49	26	62	26	66	—	—
30	6 46	20	21	25	30	28	34	28	35	28	47	29	45
31	6 59	16	9	26	13	31	47	—	—	—	—	—	—
FEBRUARY													
1	6 37	21	5	35	13	0	29	34	42	34	50	35	51
2	6 56	16	5	22	14	26	22	31	40	34	39	34	29
3	6 51	16	10	20	9	34	22	33	23	31	26	—	—
4	6 37	16	2	24	9	30	8	33	16	33	20	—	—
6	6 45	03	14	05	42	05	41	04	32	35	32	27	29
7	7 10	04	14	03	25	04	38	32	17	28	24	29	30
8	7 00	—	0	0	34	0	25	0	37	35	57	—	—
9	6 47	04	10	03	23	03	60	01	43	01	45	34	23
10	6 49	04	17	04	25	02	35	04	14	33	14	28	29
13	6 35	14	7	20	16	27	28	28	46	28	30	28	50
14	6 53	16	16	18	17	28	19	—	—	—	—	—	—
15	6 56	12	10	15	12	15	10	12	2	—	0	24	13
16	6 58	28	18	26	31	18	15	23	28	23	24	24	26
17	6 38	27	4	06	22	03	32	03	35	03	9	31	33
18	6 39	04	27	06	41	09	13	10	8	0	10	33	17
20	6 28	—	0	35	30	33	35	—	—	—	—	—	—
21	6 42	09	8	34	10	33	25	34	31	—	—	—	—
22	6 43	25	15	29	36	30	48	—	—	—	—	—	—
24	6 50	31	3	29	28	32	30	31	31	—	—	—	—
25	6 47	17	24	17	17	26	38	35	35	33	26	—	—
27	6 44	—	0	0	24	0	38	33	63	33	75	—	—
28	6 50	17	7	34	36	34	27	33	30	—	—	—	—
MARCH													
1	6 43	16	2	30	24	31	26	32	49	29	24	—	—
2	6 44	—	0	26	20	27	42	27	36	27	37	—	—
3	6 45	09	12	18	24	22	26	23	26	24	22	27	28
4	6 44	—	0	28	10	27	18	29	17	29	14	28	16
6	6 49	—	0	32	24	33	43	33	48	33	37	—	—
7	6 41	—	0	06	10	06	23	05	34	03	20	03	17
8	6 37	29	4	33	10	33	5	34	6	26	13	25	25
9	6 38	05	20	07	24	03	30	01	31	33	37	32	51
10	6 43	06	23	07	5	02	12	32	17	31	28	31	31
11	6 49	—	0	09	24	12	8	10	6	0	10	05	17
13	7 01	—	0	31	16	29	30	—	—	—	—	—	—
14	7 15	13	5	18	9	30	26	30	47	—	28	39	—
16	7 15	32	6	0	8	28	10	—	—	—	—	—	—
17	6 41	05	19	07	13	05	17	32	20	32	24	31	44
20	6 57	22	40	24	88	—	—	—	—	—	—	—	30
21	7 51	26	40	28	46	—	—	—	—	—	—	—	—
22	7 10	27	18	28	48	—	—	—	—	—	—	—	—
23	6 40	—	0	11	10	29	12	27	26	24	54	27	68
24	6 38	28	2	34	18	32	18	30	31	27	34	26	54
25	6 50	27	20	30	21	31	37	29	43	—	—	—	—
27	6 39	—	0	35	12	02	17	0	29	35	58	—	—
28	6 32	04	16	06	24	03	35	03	39	01	49	42	18
29	6 31	11	23	07	25	07	40	06	30	06	29	35	0
30	6 37	04	22	06	34	04	26	06	15	03	24	—	—
31	6 45	04	12	06	35	02	41	03	43	35	10	—	—
APRIL													
1	6 46	40	14	03	32	02	60	0	31	35	42	33	31
3	6 36	33	8	03	22	03	22	03	7	24	7	18	18
4	6 41	28	12	22	27	20	62	—	—	—	—	—	—
5	6 37	28	4	31	6	34	24	33	46	32	60	—	—
6	6 29	17	13	20	16	27	40	26	57	27	63	—	—

* Disappeared in haze at 366 m Dir. 150° Vel. 19 kms.

o Disappeared in haze at 790 m. Dir. 230° Vel. 90. kms.

Entered Ns. clouds at 564 m.

Entered Ch. clouds at 912 m. Dir. 310° Vel. 50 kms.

SULTS AT HELWAN

Wind Velocity in Kilometres per hour

METRES

PILOT BALLOON

Wind Direction East of North (Unit 10 degrees)

DATE	G.M.T. of Starting	HEIGHT ABOVE S.													
		112		500		1000		1500		2000		2500		3000	
		D	V	D	V	D	V	D	V	D	V	D	V	D	V
1943	H. M.														
APRIL															
7	.	6	31	—	0	27	12	29	24	29	33	—	—	—	—
8	.	6	26	16	5	21	19	23	11	22	28	36	27	55	29
10	.	6	39	16	16	18	86	20	114	20	120	—	—	—	—
11	.	6	30	24	18	26	17	26	50	—	—	—	—	—	—
†12	.	6	47	28	13	30	15	29	29	—	—	—	—	—	—
†13	.	6	35	15	7	22	19	28	14	31	24	31	38	—	—
†14	.	6	53	—	0	0	12	01	15	33	34	32	35	—	—
†15	.	6	26	32	3	08	5	06	8	32	7	18	9	—	—
†17	.	6	42	—	0	29	10	35	9	32	20	29	28	30	28
18	.	6	51	—	0	0	10	30	10	30	13	30	28	27	16
19	.	6	55	33	8	35	9	01	24	35	36	—	—	—	—
20	.	6	33	—	0	04	24	03	41	03	40	03	37	04	28
21	.	6	28	04	19	03	24	04	35	04	48	07	46	06	27
22	.	6	34	34	19	01	42	03	56	—	—	—	—	06	—
24	.	6	47	32	8	01	10	33	23	33	28	33	14	31	06
25	.	6	50	32	20	06	13	02	22	01	22	0	30	35	23
27	.	6	54	02	15	02	48	03	37	—	—	—	—	—	—
28	.	6	29	02	8	03	29	04	34	04	32	02	54	02	42
29	.	6	26	04	19	05	34	05	51	05	72	07	45	10	18
MAY															
1	.	6	51	40	13	03	17	03	32	03	34	04	3	—	—
2	.	6	39	34	19	05	29	03	55	04	37	03	32	—	—
3	.	6	52	01	18	04	14	07	27	06	36	14	9	09	31
4	.	6	41	05	9	05	45	12	19	13	14	17	17	17	19
5	.	6	26	28	4	05	12	16	28	17	17	17	17	16	16
8	.	6	35	16	22	15	22	12	90	35	40	02	25	—	—
9	.	6	38	32	24	29	29	24	35	44	14	30	30	—	—
10	.	6	28	02	4	0	22	35	31	67	67	32	68	33	84
11	.	6	23	29	4	34	24	34	50	32	46	—	—	—	—
12	.	6	34	29	5	32	37	32	57	33	55	—	—	—	—
13	.	6	49	30	7	34	16	0	7	0	6	31	24	31	26
15	.	6	35	13	8	13	13	10	10	30	22	28	26	—	—
16	.	6	35	30	5	31	10	21	11	20	22	22	19	25	37
17	.	6	27	05	10	03	28	35	6	29	34	30	44	37	25
18	.	6	30	29	25	02	10	02	15	01	17	33	4	19	26
19	.	6	54	0	9	01	34	03	29	03	20	28	15	27	32
20	.	6	35	04	12	04	23	01	44	—	69	02	57	—	—
22	.	6	41	06	20	05	19	03	37	03	25	04	—	7	06
23	.	6	31	04	15	03	24	03	15	34	11	30	32	—	—
24	.	6	33	06	3	01	24	03	12	—	—	—	—	—	—
25	.	6	35	35	12	01	13	01	41	—	—	—	—	—	—
26	.	6	43	04	12	06	23	07	21	05	25	04	—	7	3
27	.	6	33	02	16	03	20	04	38	03	38	—	30	29	14
29	.	6	17	32	6	34	15	33	9	32	20	33	35	58	34
30	.	6	18	32	5	33	15	0	32	0	33	33	27	51	—
JUNE															
1	.	6	40	33	12	01	28	04	25	02	40	01	36	—	—
2	.	6	47	03	28	03	72	01	12	03	63	—	—	—	—
3	.	6	36	07	28	04	36	04	69	04	66	—	—	—	—
*5	.	6	25	05	40	05	53	—	—	—	—	—	—	—	—
6	.	6	28	05	45	05	23	05	60	—	—	—	—	—	—
7	.	6	45	0	14	0	12	34	15	31	19	28	28	27	27
8	.	6	44	32	10	21	32	35	19	35	34	35	8	32	23
9	.	6	31	03	5	34	15	35	24	0	28	35	6	34	15
10	.	6	43	32	20	04	19	05	33	06	28	05	24	—	—
12	.	6	18	34	6	03	18	03	35	—	—	—	—	—	—
13	.	6	38	0	14	01	48	01	30	03	27	05	36	03	12
14	.	6	29	0	14	0	43	01	41	01	69	01	42	—	—
15	.	6	33	31	10	03	12	35	54	33	37	34	37	—	—
16	.	6	30	29	4	32	25	35	14	02	25	04	24	02	44
17	.	6	31	30	7	34	21	01	19	33	7	31	15	34	19
19	.	6	27	30	11	02	33	35	41	—	—	—	—	—	—
20	.	6	38	30	10	01	11	0	48	35	37	32	15	—	—
21	.	6	23	0	13	01	23	35	24	31	49	30	45	29	40
22	.	6	36	34	12	0	19	01	18	01	22	34	45	35	32
23	.	6	28	35	12	02	57	34	24	03	40	02	36	02	18
24	.	6	38	0	6	03	18	05	37	05	22	0	17	0	15
26	.	6	29	0	14	0	25	03	55	04	51	06	10	03	27
27	.	6	33	30	12	05	9	02	44	0	36	02	34	0	16
28	.	6	39	30	12	35	30	35	66	35	37	01	25	33	30
29	.	6	35	30	5	35	23	0	28	0	50	0	46	03	14
30	.	6	42	35	6	01	24	03	40	05	39	—	—	—	—
JULY															
1	.	6	39	01	20	04	14	03	59	02	56	03	39	—	—
3	.	6	49	34	5	01	23	01	62	—	—	—	—	—	—
4	.	7	04	34	19	03	24	03	81	02	42	02	87	—	—
5	.	7	03	30	8	35	13	0	46	—	—	—	—	—	—
6	.	6	47	31	8	35	40	06	17	04	21	03	22	01	19

† International days.

* Disappeared in haze at 959 m. Dir. 60° Vel. 61 kms.

RESULTS AT HELWAN (*continued*)

d Wind Velocity in Kilometres per hour

PILOT BALLOON

Wind Direction East of North (Unit 10 deg)

DATE	G.M.T. of Starting	HEIGHT ABOVE														
		112		500		1000		1500		2000		2500		3000		
		D	V	D	V	D	V	D	V	D	V	D	V	D		
1943		H.	M.													
JULY																
7	.	.	.	6	34	32	7	34	19	34	32	13	31	20	31	27
8	.	.	.	6	34	27	8	31	20	30	0	36	0	56	0	63
10	.	.	.	6	36	—	0	33	8	35	33	0	47	—	—	—
11	.	.	.	6	32	34	6	34	23	0	30	0	42	—	—	—
12	.	.	.	6	51	34	16	34	12	34	23	33	22	33	25	35
13	.	.	.	6	53	02	13	0	23	01	41	0	32	01	51	13
14	.	.	.	6	30	31	9	0	27	0	10	—	—	—	—	35
*15	.	.	.	6	41	31	9	0	13	—	—	—	—	—	—	—
17	.	.	.	6	41	29	9	03	33	01	21	—	—	—	—	—
°18	.	.	.	6	38	31	10	01	17	—	—	—	—	—	—	—
*19	.	.	.	6	27	31	5	03	25	—	—	—	—	—	—	—
+20	.	.	.	6	55	02	20	03	23	—	—	—	—	—	—	—
21	.	.	.	6	45	03	13	04	22	03	36	04	29	02	4	27
22	.	.	.	6	23	04	6	04	22	01	31	01	40	01	11	—
≈24	.	.	.	6	34	—	0	33	10	—	—	—	—	—	—	—
25	.	.	.	6	27	32	5	33	19	33	19	31	23	32	30	—
°26	.	.	.	6	46	29	6	27	7	—	—	—	—	—	—	—
°27	.	.	.	6	28	32	5	01	22	—	—	—	—	—	—	01
28	.	.	.	6	22	33	5	03	13	04	23	06	25	07	32	09
29	.	.	.	6	27	35	10	03	13	03	38	04	32	—	—	16
31	.	.	.	6	32	34	12	03	20	01	27	02	30	01	29	34
AUGUST †				6	42	35	12	01	20	34	30	29	10	26	34	26
1	.	.	.	6	32	35	14	35	114	18	30	33	12	34	42	—
2	.	.	.	6	55	29	5	35	9	35	12	—	—	—	—	—
3	.	.	.	6	38	34	8	34	22	34	17	32	28	32	19	30
4	.	.	.	6	30	32	10	01	12	0	6	28	23	30	22	28
5	.	.	.	6	37	28	8	32	17	—	—	—	—	—	—	25
°6	.	.	.	6	28	33	8	32	23	33	60	—	—	—	—	—
7	.	.	.	6	45	33	4	05	4	28	3	—	—	—	—	—
8	.	.	.	6	38	30	13	07	22	—	—	—	—	—	—	—
°9	.	.	.	6	23	32	10	06	25	03	19	30	30	28	25	24
10	.	.	.	6	41	35	5	04	23	35	20	32	37	32	24	29
11	.	.	.	6	43	29	5	35	13	03	9	03	12	0	15	19
12	.	.	.	6	43	31	6	03	17	02	14	04	26	06	40	30
13	.	.	.	6	50	31	12	05	24	06	21	04	26	—	—	—
14	.	.	.	6	50	29	12	06	22	06	29	—	—	—	—	—
15	.	.	.	6	36	29	12	33	5	35	42	33	52	—	—	—
16	.	.	.	6	44	27	12	33	22	0	22	—	—	—	—	—
17	.	.	.	6	35	31	12	34	14	04	11	05	16	03	14	—
18	.	.	.	6	44	31	7	35	26	03	18	03	25	02	28	01
19	.	.	.	6	46	31	6	0	16	34	25	35	13	31	8	23
20	.	.	.	6	35	31	18	33	14	0	11	33	30	34	24	0
21	.	.	.	6	40	31	8	02	15	03	13	01	15	01	20	9
22	.	.	.	6	27	31	8	0	14	01	30	07	10	0	11	26
23	.	.	.	6	33	30	16	0	17	0	54	—	—	—	—	—
°25	.	.	.	6	18	—	0	33	24	—	—	—	—	—	—	—
26	.	.	.	6	37	31	4	0	23	33	12	03	11	04	22	18
27	.	.	.	6	31	01	4	04	20	02	36	06	18	33	16	22
28	.	.	.	6	40	34	17	03	50	04	24	—	—	—	—	—
29	.	.	.	6	51	32	10	02	18	01	33	05	35	02	13	—
30	.	.	.	6	32	34	16	0	24	03	31	05	25	04	21	32
31	.	.	.	7	01	31	17	02	24	35	24	04	12	27	7	21
SEPTEMBER				7	01	—	0	07	18	02	9	33	13	28	20	25
1	.	.	.	6	48	29	9	02	17	0	42	01	24	33	02	30
4	.	.	.	6	52	02	13	02	36	03	62	35	7	30	18	32
5	.	.	.	6	44	31	15	0	32	01	26	34	41	29	11	23
6	.	.	.	6	34	—	0	03	8	30	32	27	40	—	—	—
7	.	.	.	7	31	28	4	32	6	0	21	34	31	34	24	—
8	.	.	.	6	39	16	8	20	21	23	35	42	31	34	42	—
9	.	.	.	6	34	26	3	0	20	31	21	31	28	32	27	29
11	.	.	.	6	34	31	7	34	13	02	22	0	31	35	25	—
12	.	.	.	6	44	30	8	35	18	01	26	03	32	03	24	25
13	.	.	.	6	32	34	4	02	18	03	29	07	12	01	25	06
14	.	.	.	6	43	0	10	02	18	03	29	07	12	—	—	25
15	.	.	.	6	35	02	14	03	25	04	49	04	47	05	37	01
16	.	.	.	6	50	03	04	04	88	04	33	—	—	—	—	—
**18	.	.	.	6	11	30	10	04	11	—	—	—	—	—	—	—
19	.	.	.	6	29	32	14	01	15	04	24	34	10	19	5	18
20	.	.	.	6	48	0	9	35	14	01	13	01	12	12	—	15
21	.	.	.	6	36	—	0	0	13	35	31	33	27	32	24	29
22	.	.	.	6	49	28	6	35	9	01	15	—	—	—	—	—
**23	.	.	.	6	40	—	0	34	8	—	—	—	—	—	—	—
25	.	.	.	6	45	35	7	03	30	04	44	—	—	—	—	—
26	.	.	.	6	48	29	9	03	27	02	17	02	20	02	18	—
27	.	.	.	6	29	03	6	04	24	04	48	01	16	32	12	15
28	.	.	.	6	25	03	12	03	35	04	36	—	—	—	—	—

* Burst at 808 m. Dir. 0° Vel. 7 kms.

° Burst at 772 m. Dir. 10° Vel. 17 kms.

* Burst at 692 m. Dir. 40° Vel. 25 kms.

+ Burst at 777 m. Dir. 320° Vel. 12 kms.

= Burst at 782 m. Dir. 330° Vel. 24 kms.

v Disappeared in sun's disc at 772 m. Dir. 280° Vel. 16 kms.

▲ Burst at 737 m. Dir. 0° Vel. 18 kms.

† International month.

RESULTS AT HELWAN (continued)
Wind Velocity in Kilometres per hour

METRES																							
8500		4000		4500		5000		5500		6000		7000		8000		9000		10000		11000		12000	
D	V	D	V	D	V	D	V	D	V	D	V	D	V	D	V	D	V	D	V	D	V	D	V
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
03	6	30	10	29	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
00	36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	13	22	23	21	26	22	42	23	41	23	38	26	33	—	—	—	—	—	—	—	—	—	—
19	5	21	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	13	35	5	31	7	26	10	28	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	55	21	66	22	78	23	68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	30	22	39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	15	21	30	21	35	20	42	21	42	22	35	—	—	—	—	—	—	—	—	—	—	—	—
20	23	21	24	22	36	22	54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	90	25	66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35	4	27	11	28	16	25	12	26	10	24	32	—	—	—	—	—	—	—	—	—	—	—	—
27	18	30	16	26	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
08	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	—	20	26	24	26	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	20	19	29	03	6	33	11	33	10	34	5	—	—	—	—	—	—	—	—	—	—	—	—

Entered Cu. clouds at 946 m. Dir. 320° Vel. 25 kms.

Burst at 880 m. Dir. 100° Vel. 36 kms.

Burst at 910 m. Dir. 320° Vel. 30 kms.

** Burst at 808 m. Dir. 70° Vel. 11 kms.

*** Entered Cu. clouds at 596 metres.

PILOT BALLOON

Wind Direction East of North (Unit 10 degrees)

DATE	G.M.T. of Starting	HEIGHT ABOVE											
		112		500		1000		1500		2000		2500	
		D	V	D	V	D	V	D	V	D	V	D	V
1943	H. M.												
OCTOBER													
3	.	6	39	09	40	12	64	13	72	—	—	—	—
4	.	6	44	—	0	34	35	0	18	—	—	—	—
5	.	6	26	—	0	0	24	03	14	29	8	20	16
6	.	6	34	31	9	05	23	03	24	32	4	26	19
7	.	6	10	05	12	06	22	01	37	0	49	—	—
9	.	6	37	35	4	05	18	03	34	03	54	—	—
10	.	6	27	19	14	20	41	22	46	23	61	—	—
11	^	7	02	27	18	33	29	—	—	—	—	—	—
12	.	6	44	—	0	32	16	32	10	—	—	—	—
13	.	6	38	—	0	05	16	05	17	—	—	—	—
14	.	6	25	—	0	09	8	10	18	12	12	—	—
16	.	6	51	09	45	07	34	15	4	01	8	28	22
17	.	6	32	07	50	08	30	07	19	33	6	28	39
18	.	6	34	05	34	03	43	0	36	35	14	—	—
v 19	.	6	36	0	8	—	—	—	—	—	—	—	—
20	.	6	28	—	0	01	17	01	18	34	15	—	—
21	.	6	48	—	0	17	5	23	2	31	13	30	19
23	.	6	30	—	0	15	8	03	8	24	11	26	9
24	.	6	24	—	0	06	5	34	12	29	15	30	16
25	.	6	35	32	8	26	18	26	18	26	18	25	37
26	.	6	31	33	8	33	4	35	10	23	1	36	10
27	.	6	36	—	0	34	7	35	19	0	19	35	22
28	.	6	29	—	0	08	24	02	18	03	19	29	33
30	.	7	35	05	32	07	54	07	19	07	21	07	28
31	.	6	19	05	25	05	20	07	20	13	7	19	10
NOVEMBER													
1	.	7	17	04	13	07	14	18	4	17	13	18	17
2	.	6	21	—	0	07	20	12	10	16	8	20	10
3	.	6	38	16	18	21	40	24	42	22	54	21	81
4	.	6	39	16	8	24	6	31	15	32	25	29	25
6	.	6	33	03	15	03	23	04	26	0	30	0	25
7	.	6	19	04	24	07	38	05	35	03	37	03	55
8	.	6	38	34	5	11	24	10	52	11	60	11	54
9	.	6	56	—	0	20	18	21	25	21	42	20	60
*10	.	6	33	33	20	03	20	—	—	—	—	—	—
11	.	6	25	34	11	04	32	04	39	04	18	12	5
14	.	6	34	35	14	0	48	33	17	—	—	—	—
15	.	6	41	02	14	02	26	02	30	02	44	02	34
16	.	6	39	0	10	03	38	04	44	04	54	—	—
17	.	6	29	01	10	02	48	03	54	05	21	02	39
18	.	6	28	03	7	04	38	05	29	02	58	34	15
21	.	6	56	—	0	04	27	06	15	—	—	—	—
22	.	6	35	35	22	04	43	03	18	04	48	0	15
23	.	7	04	11	06	14	07	49	08	14	07	26	04
24	.	6	36	—	0	07	4	10	43	11	18	10	24
25	.	6	37	—	0	21	28	22	14	22	19	21	29
*27	.	6	43	04	25	03	13	—	—	—	—	—	—
28	.	6	37	04	27	12	8	11	8	14	11	20	26
29	.	7	13	03	15	05	23	35	9	32	6	21	9
30	.	6	58	04	39	07	43	22	10	22	4	17	2
DECEMBER													
1	.	7	02	04	23	05	35	05	12	03	10	25	13
2	.	6	31	02	20	06	35	07	16	05	14	06	25
4	.	6	38	—	0	05	23	05	53	06	16	05	32
5	.	6	41	35	10	01	24	01	48	01	31	0	30
6	.	6	23	0	11	02	45	04	36	04	21	0	18
12	.	6	36	—	0	20	19	09	16	17	13	15	17
13	.	6	38	—	0	14	5	18	13	20	13	18	13
†14	.	6	31	—	0	11	14	12	9	10	5	34	9
†14	.	12	05	02	11	27	8	20	7	20	5	0	14
†15	.	7	04	30	12	01	35	01	7	31	13	32	14
†15	.	12	25	32	14	01	18	0	24	30	16	30	18
†16	.	6	39	—	0	33	18	34	22	32	24	27	39
†16	.	12	03	30	26	31	31	28	35	—	—	—	—
18	.	6	36	13	6	26	12	30	9	31	11	—	—
19	.	6	31	—	0	02	19	0	20	33	16	32	13
20	.	6	31	01	23	01	34	04	31	31	11	30	11
21	.	6	26	01	15	04	41	05	16	07	13	22	12
22	.	6	30	34	15	04	26	04	48	03	38	07	14
°23	.	7	58	18	9	—	—	—	—	—	—	17	40
25	.	6	31	04	42	09	2	05	18	06	12	14	17
26	.	6	38	01	11	03	37	04	65	06	42	—	—
27	.	7	25	34	6	04	36	04	46	05	35	03	17
29	.	6	41	04	4	32	11	02	10	26	21	26	25
30	.	6	36	—	0	04	1	35	18	32	20	29	38

^ Entered Cb. clouds at 707 m. Dir. 330° Vel. 42 kms.

v Burst at 472 m. Dir. 20° Vel. 17 kms.

* Entered St. Clouds at 648 m. Dir. 40° Vel. 25 kms.

* Entered St. Clouds at 886 m. Dir. 40° Vel. 25 kms.

† International days.

° Entered St. clouds at 365 m. Dir. 10° Vel. 6 kms.

RESULTS AT HELWAN (continued)

Wind Velocity in Kilometres per hour

METRES

UPPER WIND SUMMARY**FREQUENCY OF OBSERVATIONS
1943****January**

at 8 h.

February

at 8 h.

Speed Limits k. p.h.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6K.P.H.	Total all cases	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6K.P.H.	Total all cases	
Surfaces	6—25	—	—	2	5	10	—	1	—	—	—	—	4	1	2	4	—	2	—	—	
	26—50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	51—75	—	—	—	—	—	—	—	—	—	—	—	5	1	2	4	—	2	—	8	
	>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Total ..	—	—	2	5	10	—	1	—	6	24	—	—	—	—	—	—	—	—	22	
	Mean Velocity ...	—	—	8	18	12	—	8	—	—	12	—	—	16	8	8	14	—	16	—	14
500 m.	6—25	—	1	1	—	—	2	3	4	1	—	—	3	4	—	1	4	2	—	3	
	26—50	1	1	—	—	—	2	1	4	—	—	—	3	2	—	—	—	—	—	—	
	51—75	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	
	>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Total ...	—	1	2	1	—	5	4	8	1	1	23	—	6	6	—	1	4	2	3	
	Mean Velocity ...	85	22	20	—	31	21	26	16	—	26	—	24	30	—	12	15	12	32	—	28
1000 m.	6—25	—	—	1	—	—	—	1	1	3	—	—	2	—	1	1	—	—	2	2	
	26—50	1	1	—	—	—	—	2	9	1	—	—	4	3	—	—	—	—	2	3	
	51—75	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	
	>75	—	—	—	—	—	—	4	11	4	1	—	—	6	4	—	1	—	4	5	
	Total ...	—	1	1	1	—	—	—	—	—	1	23	—	—	—	—	—	—	—	—	
	Mean Velocity ...	42	32	6	—	—	40	36	22	—	33	—	29	43	18	10	15	—	27	29	29
1500 m.	6—25	—	1	—	—	—	1	—	1	3	—	—	—	4	2	—	—	—	3	3	
	26—50	—	2	—	—	—	—	2	6	1	—	—	—	4	1	—	—	—	1	2	
	51—75	—	—	—	—	—	—	2	2	—	—	—	—	5	3	—	—	—	6	1	
	>75	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	19	
	Total ...	—	3	—	—	1	4	10	4	—	22	—	—	5	3	—	—	—	1	—	
	Mean Velocity ...	—	28	—	—	15	52	45	19	—	38	—	43	18	8	—	—	28	40	26	82
2000 m.	6—25	—	2	—	—	—	—	1	2	—	—	—	—	1	1	—	—	1	1	2	
	26—50	—	1	—	—	—	—	1	4	1	—	—	—	4	—	—	—	1	2	1	
	51—75	—	—	—	—	—	—	5	1	—	—	—	—	1	—	—	—	—	—	—	
	>75	—	—	—	—	—	—	1	10	4	—	—	—	6	1	—	—	1	3	4	
	Total ...	—	3	—	—	—	—	1	—	—	18	—	—	—	—	—	—	—	1	16	
	Mean Velocity ...	—	14	—	—	—	26	48	35	—	39	—	36	9	—	—	—	24	27	34	80
2500 m.	6—25	—	—	—	—	—	—	1	2	1	—	—	—	—	1	—	—	2	—	2	
	26—50	—	—	—	—	—	—	1	4	1	—	—	—	—	1	—	—	3	—	1	
	51—75	—	—	—	—	—	—	3	1	—	—	—	—	—	1	—	—	—	—	—	
	>75	—	—	—	—	—	—	1	9	3	—	—	—	—	3	—	—	2	3	3	
	Total ...	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	—	—	—	11	
	Mean Velocity ...	—	—	—	—	—	38	42	42	—	41	—	84	—	—	—	—	18	30	18	28
3000 m.	6—25	—	—	—	—	—	—	1	5	—	—	—	—	—	1	—	—	2	—	3	
	26—50	—	—	—	—	—	—	1	1	—	—	—	—	—	1	—	—	1	—	1	
	51—75	—	—	—	—	—	—	2	6	1	—	—	—	—	—	—	—	1	—	4	
	>75	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	1	—	11	
	Total ...	—	—	—	—	—	—	44	45	81	—	49	—	51	—	—	—	28	25	24	28
3500 m.	6—25	1	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	1	3	1	
	26—50	—	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	1	—	—	
	51—75	—	—	—	—	—	—	1	3	—	—	—	—	—	—	—	—	1	4	1	
	>75	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	6	
	Total ...	—	1	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	
	Mean Velocity ...	18	—	—	—	—	—	34	56	—	—	43	—	—	—	—	—	38	30	37	32
4000 m.	6—25	1	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	1	—	1	
	26—50	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	1	—	1	
	51—75	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	3	
	>75	—	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	1	—	—	
	Total ...	—	1	—	—	—	—	—	—	—	4	—	—	—	—	—	—	1	—	3	
	Mean Velocity .	16	—	—	—	—	—	48	52	—	—	40	—	—	—	—	—	49	24	29	34

UPPER WIND SUMMARY

FREQUENCY OF OBSERVATIONS

1943

March

April

at 8 h.

Speed Limits k. p. h.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6 K.P.H.	Total all cases		N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6 K.P.H.	Total all cases		
Surface	6-25	—	6	2	—	—	—	2	1			3	3	—	—	1	2	1	2	4			
	26-50	—	—	—	—	—	—	1	1	—		—	—	—	—	—	—	—	—	—			
	51-75	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—			
	>75	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—			
	Total ..	—	6	2	—	—	—	1	3	1	12	25	3	3	—	1	2	1	2	4	8	24	
	Mean Velocity ...	—	19	18	—	—	—	40	26	6	21		14	17	—	7	14	18	12	11		14	
500 m.	6-25	3	2	5	—	2	—	2	5			4	4	—	—	1	2	3	2	2			
	26-50	—	2	—	—	—	—	2	—			2	3	—	—	—	—	—	—	—	—		
	51-75	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—		
	>75	—	—	—	—	—	—	1	—	—		—	—	—	—	1	—	—	—	—	—		
	Total ...	3	4	5	—	2	1	4	5	1	25		6	7	—	—	2	3	3	2	1	24	
	Mean Velocity ...	13	26	19	—	16	88	31	19	—	24		22	25	—	—	51	22	13	10		23	
1000 m.	6-25	2	2	—	1	—	—	3	1			5	2	—	—	—	1	2	2	2			
	26-50	1	3	1	—	—	—	1	2	4		—	4	—	—	—	—	—	3	—			
	51-75	—	—	—	—	—	—	—	—			—	2	—	—	—	1	—	—	—			
	>75	—	—	—	—	—	—	—	—			—	—	—	—	—	1	—	—	—			
	Total ...	3	5	1	1	—	—	1	5	5	1	22	6	8	—	—	2	1	5	2	—	24	
	Mean Velocity ...	23	26	40	8	—	—	26	22	30	—	26	26	36	—	—	88	11	31	16		34	
1500 m.	6-25	1	1	1	—	—	—	1	2			—	—	—	—	—	—	1	—	4			
	26-50	2	4	—	—	—	—	1	3	4		—	2	3	—	—	—	1	—	3			
	51-75	—	—	—	—	—	—	—	—			—	1	—	—	—	1	—	—	—			
	>75	—	—	—	—	—	—	—	—			—	—	—	—	—	1	—	2	7	—		
	Total ...	3	5	1	—	—	—	1	4	6	—	20	3	5	—	—	1	—	2	7	—	19	
	Mean Velocity ...	22	32	6	—	—	—	26	30	35	—	30	30	40	—	—	120	11	45	25		36	
2000 m.	6-25	2	2	—	—	—	—	1	3	1		—	2	1	2	—	—	1	1	—	1		
	26-50	1	1	—	—	—	—	1	3	3		—	1	—	—	—	—	2	3	—	1		
	51-75	1	—	—	—	—	—	—	—			—	—	—	—	—	1	—	3	5	—	16	
	>75	—	—	—	—	—	—	—	—			—	4	3	—	—	1	—	3	5	—	16	
	Total ...	4	3	—	—	—	—	2	6	4	—	19	3	1	2	—	1	1	3	5	—	16	
	Mean Velocity ...	32	24	—	—	—	—	38	27	32	—	30	42	37	46	—	9	7	42	35		36	
2500 m.	6-25	1	2	—	—	—	—	—	2	—		—	1	1	1	—	—	1	1	1	2		
	26-50	1	—	—	—	—	—	—	1	2		—	1	1	—	—	—	1	1	—	1		
	51-75	—	—	—	—	—	—	—	2	1		—	—	—	—	—	1	—	—	—			
	>75	—	—	—	—	—	—	—	—			—	2	2	1	—	1	—	2	3	—	11	
	Total ...	2	2	—	—	—	—	—	5	3	—	—	12										
	Mean Velocity ...	30	17	—	—	—	—	—	36	42	—	—	38	32	42	18	—	27	—	36	22		30
3000 m.	6-25	1	1	—	—	—	—	—	3	1		—	1	1	1	—	—	1	1	1	1		
	26-50	1	—	—	—	—	—	—	1	—		—	1	—	—	—	—	1	1	1	1		
	51-75	—	—	—	—	—	—	—	4	3		—	2	1	2	—	1	—	2	1	—	9	
	>75	—	—	—	—	—	—	—	—			—	2	1	2	—	1	—	2	1	—	9	
	Total ...	2	1	—	—	—	—	—	4	3	—	—	10										
	Mean Velocity ...	30	17	—	—	—	—	—	31	31	—	—	30	20	30	25	—	10	—	28	32		24
3500 m.	6-25	1	—	—	—	—	—	—	1	1		—	—	—	—	—	—	—	1	2	1		
	26-50	2	—	—	—	—	—	—	1	1		—	—	—	—	—	—	—	2	1	—	6	
	51-75	1	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	3	1	—	6	
	>75	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	3	1	—	6	
	Total ...	4	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	2	1	—	6	
	Mean Velocity ...	81	—	—	—	—	—	—	29	27	—	—	30	—	20	—	—	—	—	81	28		27
4000 m.	6-25	—	—	—	—	—	—	—	—	2		—	—	—	—	—	—	—	—	3	—		
	26-50	—	—	—	—	—	—	—	—	1		—	—	—	—	—	—	—	—	3	—		
	51-75	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	3	—		
	>75	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	3	—		
	Total ...	—	—	—	—	—	—	—	—	3	1	4	—	—	—	—	—	—	—	3	—	4	
	Mean Velocity ...	—	—	—	—	—	—	—	—	41	—	41	—	27	—	—	—	—	—	—	89	—	36

UPPER WIND SUMMARY**FREQUENCY OF OBSERVATIONS**

1943

May

at 8 h.

June

at 8 h.

Speed Limits k. p. h.	May								June									
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
Surface																		
6-25	5	7	—	1	1	—	1	3	8	26	10	—	—	—	—	9		
26-50	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—		
51-75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Total ...	5	7	—	1	1	—	1	3	8	26	10	3	1	—	—	9	3	26
Mean Velocity ...	15	13	—	8	22	—	25	12	14	11	38	28	—	—	—	12	15	
500 m.											9	6	—	—	—	—	1	
6-25	8	8	—	2	—	—	—	2	—	—	5	1	—	—	—	—	—	
26-50	1	3	—	—	—	—	—	1	—	—	1	2	—	—	—	—	—	
51-75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	9	11	—	2	—	—	1	3	—	26	15	9	—	—	—	1	—	26
Mean Velocity ...	19	23	—	18	—	—	29	21	21	27	29	—	—	—	32	—	25	28
1000 m.											9	1	—	—	—	—	—	
6-25	4	2	2	1	—	1	2	—	—	—	6	4	—	—	—	—	—	
26-50	5	4	1	—	—	—	—	—	—	—	2	3	—	—	—	—	—	
51-75	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	9	7	3	2	1	2	—	2	—	26	17	8	—	—	—	—	—	25
Mean Velocity ...	29	31	19	54	28	14	—	33	30	31	44	—	—	—	—	—	—	85
1500 m.											2	1	—	—	—	—	2	
6-25	3	2	—	1	2	—	1	2	—	—	7	4	—	—	—	—	2	
26-50	3	4	—	—	—	—	—	1	—	—	1	3	—	—	—	—	2	
51-75	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	6	7	—	1	2	—	2	5	—	23	10	8	—	—	—	4	—	22
Mean Velocity ...	25	37	—	14	20	—	24	42	31	38	42	—	—	—	—	—	28	38
2000 m.											4	3	—	—	—	—	2	
6-25	1	1	—	1	1	1	1	1	2	—	7	1	—	—	—	1	1	
26-50	—	1	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	
51-75	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	3	2	—	1	2	1	2	7	2	20	11	4	—	—	—	1	3	19
Mean Velocity ...	47	20	—	9	26	19	20	36	31	30	24	—	—	—	—	28	25	28
2500 m.											5	2	—	—	—	—	1	
6-25	—	—	1	—	1	—	—	—	—	—	2	1	—	—	—	—	2	
26-50	—	—	—	—	2	—	3	1	—	—	—	—	—	—	—	—	1	
51-75	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	
Total ...	1	—	1	—	3	—	3	3	1	—	12	7	3	—	—	2	2	14
Mean Velocity ...	51	—	22	—	28	—	33	69	42	24	18	—	—	—	—	34	26	24
3000 m.											4	—	—	—	—	1	1	
6-25	—	—	—	—	1	—	1	2	1	—	2	—	—	—	—	2	1	
26-50	—	—	—	—	—	—	—	3	1	—	—	—	—	—	—	—	2	
51-75	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	—	—	—	—	1	1	2	1	1	6	7	—	—	—	—	2	2	11
Mean Velocity ...	—	—	—	—	24	37	42	11	31	27	—	—	—	—	—	38	21	27
3500 m.					—	—	—	—			1	—	—	—	—	1	2	
6-25	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	2	
26-50	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	2	1	
51-75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	1	—	—	—	—	—	—	—	—	—	3	3	1	—	—	1	3	3
Mean Velocity ...	11	—	—	—	—	87	—	—	24	32	42	—	—	—	—	20	29	22
4000 m.											2	—	—	—	—	1	1	
6-25	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	2	—	
26-50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	
51-75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
>75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	—	—	—	—	—	—	—	—	—	—	1	4	—	—	—	2	—	7
Mean Velocity ...	—	—	—	—	—	—	—	9	9	26	—	—	—	—	—	25	—	26

UPPER WIND SUMMARY

FREQUENCY OF OBSERVATIONS

1943

July

at 8 h.

August

at 8 h.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6 K.P.H.	Total all cases
5	—	—	—	—	—	4	15	—	
5	—	—	—	—	—	4	15	7	31
13	—	—	—	—	—	11	11	—	11
15	6	I	—	—	—	—	4	—	
1	—	—	—	—	—	—	—	—	
17	7	I	—	—	—	—	4	2	31
24	26	22	—	—	—	—	20	—	24
9	7	—	—	—	—	—	—	1	
5	2	—	—	—	1	—	—	1	
1	—	—	—	—	—	—	—	—	
15	9	—	—	—	1	—	—	2	1
25	19	—	—	30	—	—	36	—	28
2	7	I	—	—	—	2	—	—	
1	3	—	—	—	—	—	3	1	
3	10	I	—	—	—	—	2	5	—
19	21	10	—	—	—	16	32	—	22
5	3	—	—	—	—	—	2	5	
2	1	—	—	—	—	—	1	—	
7	4	—	—	—	—	—	3	5	—
22	24	—	—	—	—	22	18	—	21
2	—	—	—	I	3	3	2	—	
—	—	I	—	—	—	—	—	—	
2	—	—	I	—	I	3	5	2	15
16	—	30	—	11	18	25	20	—	21
2	—	—	I	—	—	1	2	—	
—	—	—	—	—	—	5	—	—	
2	—	—	I	—	—	6	2	—	11
10	—	—	17	—	35	18	—	—	25
—	—	I	—	I	—	—	—	—	
—	—	—	—	—	—	1	—	—	
—	—	I	—	I	—	2	—	—	7
36	6	—	18	18	48	—	—	—	27
—	—	—	—	—	—	2	—	—	
—	—	—	—	—	—	1	—	—	
—	—	—	—	—	—	3	—	—	5
—	—	—	—	—	—	84	—	10	28

UPPER WIND SUMMARY**FREQUENCY OF OBSERVATIONS****1943****September**

at 8 h.

October

at 8 h.

Speed Limits k. p. h.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6K.P.H.	Total all cases	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6K.P.H.	Total all cases
Surface	6—25	5	2	—	—	1	—	3	5	—	—	1	2	—	—	1	—	1	3	—
	26—50	—	1	—	—	—	—	—	—	—	—	—	2	3	—	—	—	—	—	—
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ...	5	3	—	—	1	—	3	5	7	24	—	—	—	—	—	—	—	—	—
	Mean Velocity ...	11	19	—	—	8	—	8	11	—	12	8	26	45	—	14	—	18	8	23
500 m.	6—25	11	4	1	—	1	—	—	1	—	—	3	5	2	1	—	—	1	1	—
	26—50	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	> 75	—	1	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—
	Total ...	13	8	1	—	1	—	—	1	—	24	4	6	5	2	1	—	1	2	3
	Mean Velocity ...	17	31	18	—	21	—	—	6	—	21	21	24	30	36	41	—	18	22	26
1000 m.	6—25	7	1	—	—	—	—	—	1	—	—	6	4	1	4	—	—	1	1	—
	26—50	4	6	—	—	—	—	—	1	—	—	2	2	1	—	—	—	1	—	—
	51—75	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ...	11	8	—	—	—	—	1	—	—	22	8	5	4	1	—	—	1	1	2
	Mean Velocity ...	21	41	—	—	—	—	35	—	26	29	21	19	19	72	—	46	18	10	23
1500 m.	6—25	7	—	1	—	—	—	—	1	—	—	4	2	1	2	—	—	1	3	2
	26—50	3	2	—	—	—	—	—	1	—	—	1	1	—	—	—	—	1	—	—
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ...	10	2	1	—	—	—	1	1	3	—	18	5	2	1	2	—	2	3	2
	Mean velocity ...	22	40	12	—	—	—	42	40	23	25	21	36	21	10	—	36	14	10	21
2000 m.	6—25	4	1	—	—	—	—	—	2	3	—	2	1	—	—	—	2	3	2	—
	26—50	—	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—	3	1	—
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ...	4	2	—	—	—	—	—	2	5	14	3	5	2	1	2	—	4	2	12
	Mean velocity ...	23	30	—	—	—	—	—	16	22	23	20	—	28	—	13	—	22	18	20
2500 m.	6—25	2	—	—	1	—	—	1	3	1	—	1	—	—	—	—	—	3	1	1
	26—50	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	2	3
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	2	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10
	Total ...	3	—	—	1	—	—	1	3	1	10	1	—	—	—	—	—	4	2	3
	Mean velocity ...	26	—	—	7	—	—	14	21	6	19	19	—	—	—	—	—	21	24	28
3000 m.	6—25	—	2	—	—	—	1	2	2	—	—	1	—	—	—	—	—	3	1	2
	26—50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	1	3
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	1	—
	> 75	—	—	—	—	—	—	1	2	3	—	1	—	—	—	—	4	1	3	—
	Total ...	—	2	—	—	—	1	2	3	—	9	1	—	—	—	—	—	4	1	9
	Mean velocity ...	—	12	—	—	12	20	29	—	—	20	19	—	—	—	—	—	24	50	29
3500 m.	6—25	—	—	1	—	—	1	2	2	—	—	—	—	—	—	—	—	1	1	1
	26—50	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—
	51—75	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—
	> 75	—	—	—	—	—	—	—	1	3	3	—	1	—	—	—	—	2	1	—
	Total ...	—	—	1	—	—	1	3	3	1	9	—	—	—	—	—	—	2	1	6
	Mean velocity ...	—	—	6	—	23	22	48	—	—	28	—	—	—	—	—	—	81	54	30
4000 m	6—25	—	—	—	—	—	1	2	1	—	—	—	—	—	—	—	—	1	1	—
	26—50	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—
	51—75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—
	> 75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—
	Total ...	—	—	—	—	—	1	3	3	1	—	8	—	—	—	—	—	3	—	3
	Mean velocity ..	—	—	—	—	29	81	84	16	—	80	—	—	—	—	—	—	27	89	80

UPPER WIND SUMMARY**FREQUENCY OF OBSERVATIONS****1943****November****December**

at 8 h.

Speed Limits k. p. h.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6 K.P.H.	Total all cases
Surface	6 - 25	6	7	—	—	2	—	—	1	6
	26 - 50	—	2	—	—	—	—	—	—	24
	51 - 75	—	—	—	—	—	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	6	9	—	—	2	—	—	1	24
	Mean velocity ...	14	20	—	—	13	—	—	20	17
500 m.	6 - 25	—	5	3	1	1	1	—	—	—
	26 - 50	3	5	2	—	—	2	—	—	—
	51 - 75	—	—	—	—	—	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	3	10	5	1	1	3	—	1	24
	Mean velocity ...	41	27	28	8	18	25	—	—	27
1000 m.	6 - 25	1	2	1	1	—	3	—	2	—
	26 - 50	1	5	2	—	—	1	—	—	—
	51 - 75	—	1	1	—	—	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	2	8	4	1	—	4	—	2	23
	Mean velocity ...	20	32	38	10	—	23	—	16	28
1500 m.	6 - 25	—	2	2	1	2	1	—	2	—
	26 - 50	2	2	—	—	—	1	—	—	—
	51 - 75	1	1	1	—	—	1	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	3	5	3	1	2	3	—	2	20
	Mean velocity ...	44	36	31	11	10	38	—	16	31
2000 m.	6 - 25	3	—	1	—	2	1	1	—	—
	26 - 50	2	—	1	—	1	1	—	—	—
	51 - 75	—	1	—	1	1	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	5	1	2	1	4	3	1	—	2
	Mean velocity ...	26	55	25	55	28	40	25	—	32
2500 m.	6 - 25	—	1	—	—	1	2	—	1	—
	26 - 50	2	1	1	—	1	—	1	—	—
	51 - 75	—	—	1	—	—	1	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	2	2	2	—	2	3	—	2	13
	Mean velocity ...	40	25	40	—	22	28	—	22	30
3000 m.	6 - 25	—	—	—	1	—	1	1	—	—
	26 - 50	1	—	1	—	1	1	—	—	—
	51 - 75	—	—	—	—	1	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	1	—	1	1	1	2	2	1	9
	Mean velocity ...	27	—	48	22	28	46	25	12	31
3500 m.	6 - 25	—	—	—	—	2	1	1	—	—
	26 - 50	—	—	—	1	—	1	1	—	—
	51 - 75	—	—	1	—	—	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	—	—	1	—	2	1	2	—	6
	Mean velocity ...	—	—	54	—	32	29	28	—	34
4000 m.	6 - 25	—	—	—	—	1	1	1	—	—
	26 - 50	—	—	—	—	1	1	1	—	—
	51 - 75	—	—	—	—	—	—	—	—	—
	>75	—	—	—	—	—	—	—	—	—
	Total ...	—	—	—	—	1	1	2	—	5
	Mean velocity ...	—	—	—	—	20	33	30	47	32

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Less than 6 K.P.H.	Total all cases
	8	1	—	—	1	1	—	—	1	—
	—	1	—	—	—	—	—	—	—	—
	8	2	—	—	1	1	—	—	1	21
	14	32	—	—	6	9	—	—	12	16
	2	1	—	—	—	—	—	—	2	—
	3	6	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
	5	7	1	—	1	—	1	2	3	20
	31	33	14	—	19	—	12	14	—	27
	5	2	2	1	1	—	—	—	1	—
	1	4	—	—	—	—	—	—	—	—
	3	3	—	—	—	—	—	—	—	—
	1	7	2	—	2	—	1	5	2	20
	31	25	12	—	13	—	21	17	—	20
	2	3	1	2	1	4	2	3	3	—
	1	—	—	—	—	—	—	—	—	—
	3	3	1	2	1	1	4	3	1	19
	19	19	14	16	13	12	29	13	—	19
	4	1	—	—	—	3	—	2	1	—
	—	—	—	—	—	1	—	4	—	—
	4	1	—	—	—	4	—	6	1	2
	4	1	—	—	—	—	—	—	—	18
	16	14	—	—	18	—	30	7	—	21
	1	—	—	—	—	2	1	1	1	—
	1	—	—	—	—	—	—	5	1	13
	2	—	—	—	—	2	2	5	1	—
	1	—	—	—	—	—	—	—	—	—
	20	—	—	—	14	30	36	6	—	26
	1	—	—	—	—	—	3	2	1	—
	2	—	—	—	—	—	—	1	3	—
	2	—	—	—	—	—	—	5	1	—
	21	—	—	12	18	39	38	26	—	31
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	—	—	—	—
	27	—	—	—	—	35	37	40	16	35

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